THE MENTAL HEALTH AND PARENTING PRACTICES OF RECENTLY SEPARATED PARENTS

A thesis

submitted in partial fulfilment

of the requirements for the degree

of

Master of Science in Psychology

at the

University of Canterbury

by

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University of Canterbury

February, 2011

Acknowledgements

I wish to acknowledge my supervisors, Dr Fran Vertue, and Professor Garth Fletcher for their remarkable support and advice throughout the year. Thank you for all the invaluable time and effort you have given me in helping this thesis succeed.

I also wish to thank all of the people who supported this study and all of those who helped me to publicize this research.

Furthermore, I would finally like to acknowledge and thank all the parents who were part of these studies. This thesis would not have been possible without their participation, time, and consent.

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Abstract

This thesis investigated the mental health and parenting practices of a sample of recently separated parents. Study 1 recruited 112 recently separated mothers and fathers, who completed a web-based survey. Results showed that these parents are at higher risk of numerous mental health issues, and were more depressed than the general population. Males experienced more suicidal ideation than females did. As time since separation increased, so wellbeing decreased. Important predictors of poor mental health post-separation were discussed. Recently separated parents did not report more negative or less positive parenting than the general population, but did report lower levels of parenting self-efficacy. Several relationships between predictor and parenting variables are described. Cross-sectional relationships between mental health and parenting variables are also discussed. Study 2 was conducted five months later and 79% (88) of the parents from Study 1 completed the web based survey for Study 2. Results showed an increase in wellbeing over time for both males and females. Suicidal ideation decreased over time and this relationship was more pronounced for males than it was for females. Predictors of poor mental health at Time 2 were discussed. The parents' parenting self-efficacy increased over time. There were no other changes or sex differences found in parenting practices, but sex differences in parenting circumstances are discussed. This thesis enhances New Zealand research by providing an in-depth analysis of the mental health and parenting practices of recently separated parents. These findings contribute to our understanding of the circumstances that New Zealand separated parents experience, and the effects that these circumstances can have on the parents.

1. The Mental Health and Parenting Practices of Recently Separated Parents

In the last century, the most dramatic change in family life has been in the rising rate of marital dissolutions. Consequently, marital dissolution is a major issue that has attracted widespread interest throughout Western society in the past few decades. There is a growing amount of literature investigating the impact of marital dissolution. However, the majority of research has focused heavily on the children's adjustment to marital dissolution (Eggebeen & Lichter, 1991; King & Sobolewski, 2006; Sobolewski & King, 2005) with little research having been focused on the impact of marital dissolution on adults and even less, on parents.

Research into the child's adjustment has found that parental marital dissolution/separation can lead to a range of adjustment difficulties in children such as attachment problems, internalizing and externalizing behaviour problems, and mental health issues (Sirvanli-Ozen, 2005; Strohschein, 2005). Pryor and Rodgers (2001) examined the research on the child's adjustment to parental separation and concluded that, although not large, differences do arise in all important areas of development between children who experience parental separation and those who do not.

However, there have also been studies which suggest that experiencing a parental separation can lead to positive effects in children. When separation is accompanied by high quality parenting skills and a safe environment, positive effects include increased social competence, prosocial skills (Santrock & Warshak, 1979; Stolberg, Camplair, Currier, & Wells, 1987), maturity (Santrock & Warshak, 1979); self-efficacy and decreased levels of defensive behaviour (Bandura, 1977). It is also important to note, however, that parental separation can be beneficial for some children as a marital dissolution can relieve a child from abuse, neglect, conflict and other anti-social behaviours that a parent may present in front of the child (Rutter, 2009).

The research findings on children's adjustment after parental separation are important, but it is also important to investigate the impact of marital dissolution and separation on the parents' parenting practices and psychological outcomes. Parents' psychological outcomes can produce major stress in children. For example, nine studies reviewed by Coyne and Downey (1991) showed that the children of depressed parents have a three to six times greater risk of becoming clinically depressed themselves than children of non-depressed parents. This has been supported by more recent literature (Taylor & Andrews, 2009).

Children who experience parental separation are also at risk for numerous other problems, including poorer physical health, deficits in academic performance, anxiety disorders, conduct disorder, and other disruptive behaviour problems (Billings & Moos, 1983; Radke-Yarrow, 1998). A negative impact on the child's self-concept, less positive self-schemas, and a more negative attributional style has also been found to occur when parental mental health issues are present (Jaenicke et al., 1987). Therefore, research on the impact of separation is important as there are serious implications resulting for both children and adults.

Research on the impact of separation on adults (including parents and non-parents[1]) has focused on areas such as the financial status of adults (Duncan & Hoffman, 1985), the areas and level of conflict between adults post-separation (Simons, Lin, Gordon, Conger & Lorenz, 1999), the amount of time spent with children post-separation (Kelly, 2005; Smyth, 2005), and the parent-child relationship post-separation (Riggio, 2004). There is a paucity of research that solely investigates parents who go through a marital dissolution or separation and even less research which focuses on the parent's mental health and parenting practices post-separation. The literature that does focus on the parents' mental health and parenting adjustment to separation sometimes has significant methodological problems or focuses on the mother, with little research focused on the father (limitations of this research are

[1] Note: previous research has generally focused on any adult going through a marital dissolution and has not distinguished between non-parents and parents.

discussed later). Furthermore, almost no research of this kind has been conducted in New Zealand. Therefore, the current studies aimed to investigate the mental health and parenting practices of New Zealand parents who had separated in the previous two years.

Definitions

In these studies, the term *marital dissolution* (divorce)[2] refers to the termination of a lawful marriage resulting from a physical and emotional separation that has lasted for at least two years (Webb, Henaghan, Atkin, Clarkson, Caldwell & Partridge, 2007). In contrast to this, the term *separation* in these studies refers to the separation period before marital dissolution occurs, or to the termination of a relationship for couples who have not been married but have been in a de facto relationship. The current studies allowed the participation of parents who had separated from a marital partner or from a de facto partner. Although those who have separated from a de facto relationship have not had a marital dissolution in a lawful sense, they are still experiencing the same circumstances as those who have separated from a lawful marriage. From now on (unless clearly distinguished), the term *separation* will be used to include both those separated from de facto relationships, as well as those who have separated from their marital partner in the previous two years.

These studies also discuss *day-to-day care* (custody) and *contact* (access to children)[3]. *Day-to-day care* refers to which parent looks after the day-to-day care of the child. This may be shared between the parents or given solely to one parent. These arrangements may be organised by the parents themselves or by a higher authority such as the New Zealand Family Court. Shared care in New Zealand refers to a parenting plan where the child spends at least 40 percent of nights with one parent. Therefore, arrangements in which the child has anything

[2] The term '*divorce*' is no longer used in New Zealand, instead the term '*marital dissolution'* will be used in its place.

[3] In New Zealand the terms *custody* and *access* are no longer used. Instead, the terms *day-to-day care* and *contact* are used in their place.

less than 40 percent of nights with one parent are not considered shared care. Sole day-to-day care will refer to the situation where the resident parent looks after the child/ren for the majority of the time or all of the time, while the non-resident parent cares for the child/ren for a minority of the time, occasionally, or not at all. The term *contact* refers to how often a non-resident parent can have contact with their child. These definitions will be employed in these studies.

Parenting practices are also discussed in these studies which are defined and measured in two ways; the level of authoritative parenting style and the level of parenting self-efficacy. It is thought that level of authoritative parenting is a good measure of parenting practices because high-quality parenting has been conceptualized as having an authoritative parenting style (Hetherington & Stanley-Hagan, 1999). Therefore, these studies will assess level of authoritative parenting style to determine level of positive parenting.

Furthermore, parenting self-efficacy will be measured as an indicator of parenting ability. The term *parental self-efficacy* refers to both the level of knowledge of the behaviours required in effective positive parenting (Bandura, 1989) and the degree to which the parent is able to perform these behaviours competently and effectively as a parent (Bandura, 1989; Teti & Gelfand, 1991). In addition to this, there is a positive relationship between parenting self-efficacy and level of parenting ability. For example, Jones and Prinz (2005) examined the potential roles of parental self-efficacy in parent adjustment and found that parental self-efficacy is positively associated with parental competence. They stated that although the role of parental self-efficacy is likely to vary across parents, children, and cultural–contextual factors, the influence of parental self-efficacy cannot be overlooked as a possible predictor of parental competence. Additionally, Coleman and Karraker (1998) stated that parental self-efficacy beliefs have emerged as a powerful direct predictor of positive parenting practices.

Therefore, these studies will also measure parenting self-efficacy as another indication of the participants' parenting ability.

Extant Literature – Separation and Mental Health

Effects of separation on mental health. There has been a small amount of research conducted on the population of couples going through a separation[4] (e.g. Bruce & Kim, 1992; Cartwright, Kravitz, Eastman, & Wood, 1991; Hill & Hilton, 1999; Simon & Marcussen, 1999). This research has consistently shown that couples going through a separation are at greater risk for mental health issues than those who are partnered, or those who have never been partnered (Bloom, Asher & White, 1978; Cairney, Boyle, Offord, & Racine, 2003; Davies, Avison, & McAlpine, 1997; Crago, 1972; Wade & Pevalin, 2004). Such mental health issues include depression (Bruce & Kim, 1992; Richards, Hardy & Wadsworth, 1997), anxiety (Afifi, Cox, & Enns, 2006; Richards et al, 1997), and alcohol or other substance abuse (Richards et al, 1997; Williams & Dunne-Bryant, 2006; Umberson & Williams, 1993).

For example, Richards et al (1997) found that marital dissolution was associated with increased depression, anxiety and likelihood of alcohol abuse. This relationship still existed after adjusting for educational attainment, age at first marriage, history of parental marital dissolution, childhood aggression and neuroticism, current financial hardship, lack of a confidante and frequency of social contact with friends or family. However, when the frequency of contact with friends or family was controlled for, the association between marital dissolution and risk of alcohol abuse disappeared. This suggests that separation is associated with increases in mental health issues. Furthermore, it suggests that it is important to investigate the level of social support when assessing psychopathology.

[4] A clear description of the samples used in each piece of previous research will be displayed in Table 1.

Table 1:
Overview of Previous Research on Mental Health and Separation, Distinguished By Sample, Relationship, and Findings. Also Displays Variables of Interest Which Should be Considered in Future Research

Article	Sample	Relationship	Findings on Separated People	Variables to Investigate
Afifi et al(2006)	Mothers only	Marriage	Increased risk of mental health issues.	-
Aseltine and Kessler (1993)	Males and females	Marriage	Increased risk of depression (more so for females than males).	-
Barrett (2003)	Males and females	Marriage	Ethnicity and sex play roles in when mental health issues appear post-separation.	Ethnicity; Sex; Time since separation
Bloom et al (1978)	Males and females	Marriage and separation	Display an increase in a wide variety of mental health issues.	-
Bokker, Farley and Denny (2006)	Mothers and Fathers	Marriage	Fathers had higher rates of depression than mothers.	Level of contact with children; parenting plans
Booth and Amato (1991)	Males and females	Marriage	Increased stress and certain predictors influence level of post-separation stress.	Income; level of education.
Bruce and Kim (1992)	Males and females	Marriage	Fathers had higher risk of depression than mothers.	-
Butterworth and Rodgers (2008)	Males and females	Marriage and separation from de facto relationship	Couples in which either the male or female reported mental health problems had higher rates of marital disruption than couples in which neither spouse experienced mental health issues.	Mental health history
Cairney et al (2003)	Mothers	Marriage	More likely to have experienced depression, stress, lower levels of support, and frequency of contact with friends and family.	Support, stress, frequency of contact with family and friends.
Cano and O'Leary (2000)	Females Only	Marriage	Increased rate of depression when a humiliating marital event had occurred.	Level one felt wronged by their partner
Cartwright et al (1991)	Males and females	Marriage	Increased levels of depression.	-
Chatav and Whisman (2007)	Males and females	Marriage	People who had separated were at elevated risk for mood, anxiety, and substance use disorders.	Had parents separated; Familial mental health history
Coryell, Endicott and Keller (1992)	Males and females	Marriage	Increased depression in females only.	-
Coyle and Enright (1997)	Males only	-	As forgiveness increased there were significant reductions in anxiety, anger, and grief.	Level of forgiveness
Crago (1972)	Males and females	Marriage	The incidence of mental health issues is lower in married couples than in any other marital status group.	-
Davies et al (1997)	Mothers only	Marriage	Increased rates of depression.	-
Demo and Acock (1996)	Mothers only	Marriage	Those who were married had higher wellbeing than single mothers or mothers who had been through a marital dissolution.	-
Ferguson (2005)	Males and females	Marriage	Increased rate of suicide.	-

Fukuda and Takaoka (2008)	Males and females	Marriage	High rate of marital dissolution associated with high rate of suicide.	Suicide
Gibb, Fergusson and Horwood (2011)	Males and females	Marriage or separation of cohabiting relationship	Increased rate of depression, suicidal behaviour, and the total number of mental health issues experienced.	-
Hill and Hilton (1999)	Mothers and fathers	Marriage and separation	Mothers more depressed than fathers.	Role satisfaction and locus of control
Kendler, Kessler, Walters, McLean, Neale, Heath et al. (1995)	Females only	Marriage and separation	Increased risk of depression.	History of mental health; experienced recent traumatic event
Kposowa (2000; 2003)	Males and females	Marriage	Increased rate of suicide.	-
Mastekaasa (1997)	Males and females	Marriage	Increased feelings of loneliness, distress and use of alcohol.	-
McCombs-Thomas and Forehand (1993)	Mothers and Fathers	Marriage	Increased levels of depression.	-
Perreira and Sloan (2001)	Males and females	Marriage	Increased level of alcohol use.	-
Power Rodgers and Hope (1999)	Males and females	Marriage	Higher rates of alcohol use.	Avoidance behaviours
Richards et al (1997)	Males and females	Marriage	Increased likelihood of depression, anxiety and alcohol abuse.	Level of contact and support from family and friends
Rye, Folck, Heim, Olszewski and Traina (2004)	Males and females	Marriage	As forgiveness increased, levels of mental health decreased.	Level of forgiveness
Simon and Marcussen (1999)	Males and females	Marriage	Increased levels of depression (more so for females than males).	-
Strohschein, McDonough, Monette, and Shao (2005)	Males and females	Marriage	No sex differences in mental health post-separation.	Time since separation
Sweeney and Horowitz (2001)	Males and females	Marriage	Increased rates of depression. Female initiators who separated in the previous two years had less depression than non-initiators.	Who initiated separation
Umberson and Williams (1993)	Fathers	Marriage	Divorced fathers exhibit higher rates of psychological distress and alcohol consumption than married males.	Substance Use
Varner and Mandara (2009)	Mothers Only	Marriage	Increased rate of depressive symptoms.	Financial resources
Wade and Pevalin (2004)	Males and females	Marriage and separation	Increased levels of mental health issues.	Mental health history
Williams and Dunne-Bryant (2006)	Mothers and fathers	Marriage	Increased rate of depression if they have children under the age of 18.	Age of children

It has also been found that, as the time of the formal marital dissolution approaches, there is a strong decline in subjective wellbeing. Those who are going through a marital dissolution reported increases in loneliness, distress, and use of alcohol (Mastekaasa, 1997). To emphasise this point, Simon and Marcussen (1999) and McCombs-Thomas and Forehand (1993) found that the transition from being married to being single is related to increases in depressive symptoms. Furthermore, mothers in their first marriage appear to have the highest psychological wellbeing compared to remarried mothers, never-married mothers, and mothers who have been through a marital dissolution (Booth & Amato, 1991; Demo & Acock, 1996). Afifi et al (2006) showed that never-married mothers and married mothers were both at lower risk of mental health issues than those who were going through a marital dissolution. These authors suggested that the chronic stress of this major life change may have been significant in explaining these differences.

These findings are further supported in a study by Varner and Mandara (2009) who found that mothers who went through a marital dissolution had increased rates of depressive symptoms compared with continuously married or newly-married mothers. However, financial resources served as a protective factor, limiting this depressive effect to those with more financial strain. Additionally, Coryell, Endicott and Keller (1992) showed that 61.5% of adults had depression near the time of separation from a spouse. Those who were married (but later separated) were three times more likely to develop depression than those who remained married. Alternatively, Simon and Marcussen (1999) found that the transition from being single to being married can alleviate depressive symptoms. These findings suggest that being married is a protective factor against depression in the general population; that marital dissolution is associated with mental health issues; and that other predictors such as time since separation and income may influence mental health status post-separation. These variables will be measured in the current studies.

As well as an increase in mood disorders post-separation, previous research on alcohol use has shown that males and females who have had a marital dissolution drink more heavily than those who are married (Power, Rodgers, & Hope, 1999). However, the majority of previous research does not differentiate between males who were parents and males who were not parents, and does not include females in their sample. Therefore, it is of interest to research the amount of substance use in mothers and fathers post-separation.

Another important aspect of conducting this research concerns the suicidality that is associated with mental health issues, particularly after a major life change. Fukuda and Takaoka (2008) found that an extremely high marital dissolution rate is the most significant social factor to associate with the high suicide death rate for both sexes. This is supported by the findings of Kposowa (2000) who found that the risk of suicide was found to increase twofold in people who have had a marital dissolution when compared with married people. Furthermore, Ferguson (2005) showed an association between an increase in marital dissolution rates and an increase in rates of suicide in OECD countries. Therefore, suicidal ideation needs to be measured in these studies.

There has been one study conducted in New Zealand examining the direct relationship between separation and mental health and suicidal ideation (Gibb, Fergusson & Horwood, 2011). This is a study from the Christchurch Health and Development Study (CHDS), which is a longitudinal study in Christchurch following a sample of 1265 people for 30 years. Allowing for confounding factors, separation was associated with depression, suicidal behaviour, and the total number of mental health issues (Gibb et al, 2011). However, this sample does not represent the population under focus in these studies (recently separated parents) and only represents one generational cohort. Furthermore, the study did not account for time since separation. Therefore, the results cannot assess changes in mental health over time post-separation. This is an important area in need of investigation, as previous research

indicates that there may be a change in mental health status over time with decreases in mental health occurring around two to three years after the separation (Amato, 2000; Coryell et al, 1992).

Previous research shows that there may be additional predictors which may influence mental health status post-separation. A study by Cano and O'Leary (2000) examined the rates of depression in females who had recently experienced a humiliating marital event compared with females who had not experienced such an event but reported similar levels of marital discord. Although these results should be interpreted with caution as they had a biased sample (96% Caucasian), Cano and O'Leary (2000) found that a humiliating marital event also significantly increased a woman's risk for depression, even when controlling for marital discord. The higher rate of depression could not be attributed to depressive symptoms that preceded the humiliating marital event. Thus, depressive symptoms may occur more in those who feel wronged or humiliated by their partner.

In addition to this, forgiveness after a distressing event has been found to relate to improved mental health, such as reduced anxiety and grief (Coyle & Enright, 1997), reduced anger (Coyle & Enright, 1997; Rye, Folck, Heim, Olszewski & Traina, 2004), reduced depression (Rye et al., 2004), and increased wellbeing (Rye et al., 2004). Due to the findings of this research, level of forgiveness of partner will be measured in these studies to assess the association between forgiveness (including the level of feeling wronged or humiliated by ex-partner) and mental health.

Furthermore, Kendler et al. (1995) found that genetic vulnerability had a significant risk of onset of depression, along with death of a close relative, assault, serious marital problems and marital dissolution/separation but contrary to their study, Cano and O'Leary (2000) suggested that a family history of depression and lifetime history of depression were not significant covariates of current depressive episodes. It is important to try and tease out

the relative contributions of genetic vulnerability to depression and a history of depression to post-separation mood disorder. In addition, it is necessary to assess any contributing factors that have occurred post-separation, and will therefore be assessed in these studies.

It is of interest to investigate the influence of ethnicity on the subsequent process of adjustment that separated people go through. Results in a study by Barrett (2003) suggested that the mental health effects of separation are different across ethnicities in the nature and timing of the effects of separation. Barrett (2003) also found that sex interacted with ethnicity to influence the impact of separation on mental health. For example, Barrett found that separated white Americans reported significantly more depressive symptoms than separated African Americans. However, after the formal and final marital dissolution process had been completed, African Americans displayed more symptoms of substance disorders than white Americans, suggesting that for white Americans it is the initial stage of separation that increases mental health issues but for African Americans, separation may not signal the termination of the relationship, so mental health issues do not appear until the marriage ends lawfully (Barrett, 2003).

It has also been suggested that separated parents who have children under the age of 18 are at higher risk of depression than those with children over the age of 18 (Williams & Dunne-Bryant, 2006). When children are under the age of 18, their day-to-day care must be settled between the separating parents by means of a parenting plan. This requires a considerable degree of co-operation between the separating parents, which may be very difficult in high-conflict separations. Therefore, the potential for significant stress is increased in families who have children under the age of 18, increasing the risk of mental health issues in these parents. This additional variable will be assessed.

There are several other variables which previous research has linked with mental health issues post-separation. Those who leave an unhappy marriage with high amounts of

stress or conflict may actually benefit from the separation and do not suffer increased mental health issues post-separation (Amato, 2004; Aseltine & Kessler, 1993). For this reason, it is also important to measure level of satisfaction of marriage, to determine whether the level of marital satisfaction influences the level of mental health issues post-separation. Who initiated the separation (Sweeney & Horowitz, 2001); whether the parents of those separating had separated (Chatav & Whisman, 2007) or had mental health issues themselves at any stage (Chatav & Whisman, 2007); and whether mental health issues were a pre-cursor to separation (Butterworth & Rodgers, 2008) are also variables considered in this research. Thus, it is necessary to include these variables in these studies, as it is important to establish any function these variables may have on the mental health of the studied sample.

Across the existing literature, there is varying evidence to suggest that there are sex differences in mental health reactions to separation/marital dissolution. However, the studies which have investigated this are rather inconsistent when identifying which sex is at higher risk of mental health issues. Some studies suggest that females are at higher risk (Aseltine & Kessler, 1993; Coryell et al, 1992; Hill & Hilton, 1999); some studies suggest that males are at higher risk (Bruce & Kim, 1992); and a few studies have found no sex differences at all (Strohschein, McDonough, Monette, & Shao, 2005; Sweeney & Horowitz, 2001).

A study by Aseltine and Kessler, (1993) found that depressive symptoms are higher in separated females than separated males. Furthermore, Simon and Marcussen (1999) found that females were more likely to be depressed by the loss of the spousal role than males. A longitudinal study by Coryell et al (1992) found that females were four times more likely to develop depression than males.

Hill and Hilton (1999) found that separated mothers were significantly more depressed, and more likely to be severely depressed, than were separated fathers. They also found that role satisfaction and locus of control contributed to depression in separated fathers,

but even more so for separated mothers. Finally, Davies et al (1997) found that separated mothers were almost five times more likely to suffer from depression than married mothers.

However, contrary to these findings, Bokker, Farley, and Denny (2006) found that fathers who had been through a marital dissolution are at higher risk of depression than mothers who had been through a marital dissolution, particularly when fathers were non-resident parents. Furthermore, it has been found that males who have been through a marital dissolution are heavier drinkers than females who have been through a marital dissolution (Perreira & Sloan, 2001). In addition, males who have had a marital dissolution have a much higher risk of suicide than females who have had a marital dissolution (9.7 times more likely; Kposowa, 2000; Kposowa, 2003). Furthermore, Bruce and Kim (1992) found that males who were separating from a spouse were at a higher risk of first onset major depression than females who were separating from a spouse, although this finding should be interpreted with caution as the study had a small sample size (n=54).

In contrast, Strohschein et al. (2005) found no evidence to support the hypothesis that a change in marital status exerts sex-specific effects on mental health. They suggested that males and females who experienced a marital transition proceeded along similar paths in adjusting to their new roles. The New Zealand CHDS study which looked at relationship separation and mental health issues also found no differences in post-separation mental health between sexes (Gibb et al, 2011).

However, over time, secondary stresses such as decreased income have been found to impede the recovery from mental health issues, particularly in females (Strohschein et al., 2005; Sweeney & Horowitz, 2001; Varner & Mandara, 2009; Williams & Dunne-Bryant, 2006), and it may be these additional factors that contribute to the sex differences reported by other researchers. However, it has also been found that increased depressive symptoms were

not related to financial burden post-separation or adjustment to other secondary roles (Aseltine & Kessler, 1993).

Another possible explanation for the inconsistencies in findings is that females may be more depressed than males early in the transition from being married to being separated, but the differences even out as time goes by (Bruce & Kim, 1992) or that the instruments that are used to measure mental health issues are influencing the results[5]. These inconsistencies provide another reason for further investigation into the mental health of recently separated parents. Therefore, the current studies will assess predictors of mental health, and test for sex differences in mental health trajectory post-separation.

The increased risk for mental health issues post-separation is an important concern for mothers, fathers and children, given that depression and other mental health issues tend to be related to impaired work and social functioning (Goldney, Fisher, Wilson & Cheok, 2000), decreased family functioning (Keitner, Archambault, Ryan, & Miller, 2003), less effective parenting (McLoyd, 1990) and suicidality (Spijker, de Graaf, ten Have, Nolen & Speckens, 2010). Furthermore, the implications of parental mental health on children discussed earlier, show that children can also be affected by the level of parental adjustment to separation. Therefore, it is important for both the parents and the children to investigate the prevalence of mental health issues in recently separated parents in New Zealand.

Prevalence of mental health issues in New Zealand. In 2006, a nationally representative sample of New Zealand people completed the New Zealand Mental Health survey titled "*Te Rau Hinengaro*". Te Rau Hinengaro investigated the mental health in the general population of adults over 16 years, in partnered parents, and single parents. Parents, in that study, were defined as respondents aged 16-64 years living with either their own or

[5] The limitations which may be influencing the results of previous research are discussed in more depth further on.

their partner's child (or children), with the youngest child in the household aged under 16 years. Partnered parents were those who self-reported that they lived with their 'legal husband or wife' or their 'partner or de facto, boyfriend or girlfriend'. Single parents were the remaining parents.

The survey was completed by one adult (over 16 years) in each household, across 12,992 households (Tobias, Gerritsen, Kokaua & Templeton, 2009). The prevalence of New Zealand mental health rates has been estimated from this survey (see Table 2). It was found that New Zealand exhibits some of the highest rates of mental health issues in the world (Wells, Browne, Scott, McGee, Baxter & Kokaua, 2006). In the 12 months before the survey, 8% had experienced a mood disorder (5.7% for a major depressive episode); 14.8% of the sample had experienced an anxiety disorder; and 3.5% had experienced a substance use disorder (Wells et al., 2006). Furthermore, in the previous 12 months before the survey, 3.2% had exhibited suicidal ideation, 1% had made a plan for suicide and 0.4% had made an attempt at suicide (Beautrais, Wells, McGee, & Browne, 2006).

Table 2
The Prevalence of Mental Health Issues in New Zealand (Tobias et al, 2009)

	Mood Disorder	Anxiety Disorder	Substance Use Disorder	Suicidal Ideation
General Population	8.0%	14.8%	3.5%	3.2%
Partnered Parents	6.5%	13.5%	1.8%	2.1%
Single Parents	15.4%	23.9%	6%	5.1%

Single parents versus partnered parents. Tobias et al. (2009) used data from Te Rau Hinengaro to investigate the differences in mental health issue prevalence in single parents, and parents who were in a relationship. They investigated anxiety, mood disorders, substance use disorders and suicidality in their sample of 1216 single parents and 3681 partnered parents. The results of this study showed that even after adjustment for age, sex and ethnicity,

sole parents were more likely to have met the criteria for a serious diagnosable mental disorder [as defined by the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV)] in the 12 months before the survey than partnered parents were (7% versus 3%). The results also showed that even after adjustments for covariates, in the 12 months before the survey, single parents had higher rates of anxiety disorders; mood disorders; substance use disorders and suicidal ideation compared with partnered parents. The results indicated that risk factors for poorer mental health were living alone and low socio-economic status (mediated heavily by level of income; Tobias et al., 2009). These statistics demonstrate that single parents in New Zealand are at higher risk of a range of mental health issues than partnered parents.

However, the results from that study do not differentiate between different types of single parents in their study. Single parents may have always been a single parent – with the other parent never involved in the family, or single parents can be the result of separation or widowhood. Therefore, although this study highlights the risk of parenting alone and gives a good indication of the prevalence of mental health issues in a similar population, it does not describe solely the group of parents who are recently separated, or who have ever separated. Additionally, there was no indication of how long the single parents had been single or whether time since separation affected the level of mental health issues experienced. Therefore, the methodology of the current studies will allow for results that will be greatly informative to the existing New Zealand literature.

Extant Literature - Parenting Practices. The following section looks at national and international findings on parental adjustment post-separation and highlights the importance of research in this area in New Zealand.

Effects of separation on parenting variables. Research on parenting variables is important due to the implications of parenting for both the parent and the child. Two of the most potent parenting predictors that have been found to influence a child's post-separation adjustment are exposure to inter-parental conflict and quality of parenting (Amato & Keith, 1991; Kelly & Emery, 2003). High-quality parenting is conceptualized as involving parents who are warm and supportive towards their children, communicative, responsive to their children's needs, exert firm, consistent control and positive discipline, and who monitor their children's activities closely (Hetherington & Stanley-Hagan, 1999). However, Hetherington and Stanley-Hagan (1999) found that many of the different post-separation stressors result in a diminished quality of parenting, which has been associated with increased strain in parent–child relations and higher levels of child problems.

There has been some investigation into the effect that separation has on parenting practices. Some of these studies have claimed that parenting practices change after separation. For example, it was found that post-separation, discipline may be more punitive and unstable; there may be a decline in parental monitoring (Hetherington, 1993), and in supportive parenting and family cohesion (Short, 2002). Additionally, a study by Sandler, Miles, Cookstan and Braver (2008) indicated that father warmth and mother warmth were both independently related to lower child-externalizing problems. However, the relations between mother and child warmth and child-internalizing problems were different as a function of inter-parental conflict and level of warmth with the other parent. This indicates that the parents' relationship with the ex-partner may be an important parenting variable to investigate.

Greene, Anderson, Hetherington, Forgatch and DeGarmo (2003) found that there are sex differences in the parenting practices of parents who have day-to-day care of their children. For example, mothers are more communicative and monitor more than fathers,

while fathers tend to report less child rearing stress and fewer problems with discipline (Greene et al., 2003). However, attendance to parenting programs has been found to improve the quality of mother–child relationships (Sandler, Wolchik, Winslow, & Schenck, 2006).

It is also thought that many of the parenting problems that occur after separation decrease over time and thus, parenting improves over the course of the two years following separation (Hetherington, 1993). Furthermore, conflict between parents often increases in the period immediately following the separation, but then decreases again over time for the majority of families (Hetherington, 1999; Maccoby & Mnookin, 1992).

In contrast to these results, a recent high-quality longitudinal thesis in Canada found no differences in parenting style between separated parents and married parents and suggested that there were more similarities than differences in the parenting of these two groups (Strohschein, 2007). Therefore, it is of interest to examine the parenting styles of parents who separate in New Zealand, in order to clarify the discrepancies between the low and high-quality studies as well as investigate the issue in New Zealand.

When looking at the quality of parenting practices post-separation it is important to assess a range of the parents parenting practices. As well as this, the level of conflict, time since marital dissolution and whether the parent has attended a parenting course post-separation may affect the outcome of parenting quality, and thus must be measured and accounted for in these studies. Furthermore, a longitudinal analysis of parenting variables over time may help to indicate whether parenting variables change over time.

There has been some debate in the literature whether or not attachment style with the romantic partner affects style of parenting. Some articles have found that avoidant and anxious attachment styles lead to less positive parenting models and parent-child relationships (Rholes, Simpson & Friedman, 2006) and that avoidant attachment styles can lead to parents perceiving parenting as less satisfying and less personally meaningful (Rholes

et al, 2006). Another study found that securely attached parents who have separated have more positive, and less negative, interactions with their ex-partner compared with those with insecure attachment styles (Vareschi & Bursik, 2005). Furthermore, this study found that over time, all parents showed increases in positive interactions and decreases in negative interactions with their ex-partner, but this pattern was most pronounced for those with insecure attachment styles (Vareschi & Bursik, 2005).

Additionally, one study has emphasised the importance of the level of support post-separation with the level of parenting post-separation. Green, Furrer and McAllister (2007) found that parents with more social support showed greater increases in the number of positive parent-child interactions over time, but that this was mediated by the mother's level of anxious attachment. In other words, level of social support reduced mother's level of anxious attachment which influenced greater parenting practices. Therefore, level of support and attachment style will need to be taken into consideration when assessing parenting practices as they may change post-separation, which in turn may affect parenting practices.

Post-separation, parents need to develop parenting plans for their child/ren's day-to-day care. Research has demonstrated the benefits of shared care (when appropriate) for parents and children. For example, parents' mental health can be affected by the parenting plan due to the effect it can have on the level of parent-child contact and parent-child relationship (Bokker et al, 2006), and children living in shared care have better emotional, behavioural and general adjustment on multiple objective measures, and better academic achievement, when compared to children who live in sole care from one parent (Bauserman, 2002; Johnston, 1995; Kelly, 2005).

However, previous research has shown that the most likely child care arrangement post-separation is for the children to live predominantly with a single mother (Bauserman, 2002; Juby, Le Bourdais & Marcil-Gratton, 2005; Pruett & Hoganbruen, 1998; Seltzer, 1998).

Smyth (2004) states that this is likely to occur because of the traditional sex roles and work patterns held in society. In a traditional, intact family, the father is generally the primary breadwinner while the mother is the primary caregiver. This also applies in cases where the mother is in paid employment. This pattern tends to continue after separation; the mother as the carer and the father providing financial support (Smyth, 2004).

However, some research has indicated that although sole care is still the most common child care arrangement post-separation, shared care agreements are becoming more common (Ritchie, Friesen, Woodward & Vertue, 2009; Smyth, 2004). Therefore, it is of interest to also assess the pattern of day-to-day care plans developed post-separation as well as any sex differences that may occur in parents.

Extant Literature - Mental Health and Parenting variables

The following section looks at international findings on the relationship between parental mental health and parenting variables post-separation.

The relationship between mental health and parenting variables. Previous research suggests that parenting ability is associated with the level of adjustment in parents who are separating. There has been very little research into this relationship both overseas and in New Zealand. However, some interesting results have been indicated. One aspect of separation that is in need of investigation is the level of contact parents have with their children post-separation. It has been shown that those parents who lose day-to-day care of their children are at a significant risk of mental health issues (Bokker et al, 2006). These authors found that recently separated fathers with high levels of contact with their children had significantly lower levels of depression than recently separated fathers with low levels of contact with their children. Fathers who have high contact levels with their children have demonstrated significantly higher self-esteem and significantly higher levels of separation

adjustment, than fathers who have low contact levels with their children (Bokker et al, 2006). Therefore, assessing day-to-day care arrangements; parent-child relationships and contact levels; and the types of mental health issues that are associated with each of these, is another important avenue of investigation in these studies.

Furthermore, Stone (2006) found that the non-resident father's role clarity and parenting ability had a significant impact on the father-child relationship, which may affect the amount of time a non-resident father spends with his child after a separation, and thereby contribute to poor adjustment in fathers with low contact with their children. Another study suggested that after separation, the parenting practices of mothers changed, which led their sons to exhibit internalizing or externalizing disorders, which then resulted in maternal depression (DeGarmo, Patterson & Forgatch, 2004). The authors showed that intervention effects on maternal depression were mediated by reductions in their sons' externalising disorders, and that increases in effective parenting predicted reductions in child behaviour problems.

The relationship has also been found to occur in the reverse direction, where mental health issues have found to impede effective parenting practices. Taylor and Andrews (2009) state that parents who are going through a marital dissolution and are also having difficulties with depression, often are less likely to parent well and to provide their children with the support that they need. Depressed parents show more negativity towards the demands of parenting (Webster-Stratton & Hammond, 1988), find less pleasure in any activity, including interacting with their children (Stein, Gath, Bucher, Bond, Day & Cooper, 1991) are less involved in playing and reading with their children, and show less affection than non-depressed parents (Lyons-Ruth, Wolfe, & Lyubchik, 2000).

A study by Cox, Puckering and Pound (1987) showed that depressed mothers were less likely to respond to their child's signals toward them, were less likely to engage their

child in social interactions, and had more difficulty responding to their child's cues than non-depressed mothers. Furthermore, Kuczynski (1984) found that depressed parents were more likely to choose discipline strategies that required less cognitive effort and tended to become overly permissive or authoritarian rather than taking the time and effort to negotiate or talk things through. Cohn, Campbell, Matias, and Hopkins (1990) showed that depressed mothers tended to be more irritable and hostile in their interactions with their children. McLoyd (1990) found that poverty and economic loss (which can occur after separation) can lead to less supportive, less consistent, and less involved parenting. However, she also found that a major mediator in the link between economic hardship and parenting behaviour is psychological distress resulting from an excess of negative life events, including the absence and disruption of marital bonds.

A decrease in parenting due to mental health issues that arise from separation is thought to occur because the helplessness and hostility that are associated with depression can interfere with both warmth and consistency from the depressed parent to their children (Weissman & Paykel, 1974). Children are then impacted both by the effects of the separation of their parents as well as the effects of parental depression and poorer parenting. The relationship between mental health and parenting variables needs to be further examined, as there is limited research in this area, which is sometimes plagued by significant limitations.

2. Limitations of Previous Research

While there has been investigation into the mental health effects of separation, or the effects of separation on parenting practices, limitations have plagued this research which limits the extent to which clear conclusions can be established about the relationship between separation and mental health and parenting practices. There are a number of recurrent

methodological problems that research in this area is subject to, they include sampling problems, measuring problems and procedural problems. A more specific description of methodological limitations follows.

Sampling

One major limitation in the existing literature is that many studies have a small sample size (e.g. *n*=44 in Cohen, Klein, & O'Leary, 2007). In order to get meaningful results which have high power, these studies need to endeavour to obtain a large sample. Furthermore, previous studies have had samples in which the sexes are not evenly distributed (e.g. Cohen et al, 2007). In order to have a representative sample and address differences in sex that may arise, a sample with evenly distributed sex would be ideal. Research has also focused on specialised groups in these areas, for example, only investigating mothers, non-resident fathers, those who have terminated a lawful marriage or those with troublesome children and so on. Therefore, these studies cannot be generalized to the general population. These studies will aim to recruit participants with all types of backgrounds and experiences in order to represent as well as possible, the New Zealand population.

Previous research has also sampled participants who display a wide range of time since marital dissolution (McCombs-Thomas & Forehand, 1993). This may not represent a true reflection of mental health after separation as some people may have gone through the difficulties of separation and have now recovered, and some may be yet to enter the difficult period. Therefore, these studies do not reflect a true population or explanation of the process that separated parents experience and the current studies aim to provide this.

Aseltine and Kessler (1993) have indicated that those who remarry should be included in samples measuring the mental health of separated parents. Otherwise, estimates of mental health issues in those who separate may be overestimated. However, these studies are solely

studying a sample of separated parents who have separated recently in the past two years and are therefore only looking at their mental health trajectory directly after the separation and not in the further long term.

Measurement Problems

Another major limitation of previous research in this area is that many measures of mental health used in the research are sex-biased measures of mental health (Hill & Hilton, 1999). For example, using the Center for Epidemiological Studies – Depression Scale (CES-DS) (Radloff, 1977) to measure depression may be biased towards finding females more depressed then males, as the items are designed to measure symptoms of distress, rather than avoidance behaviours. It is well-known that males tend to cope with distressing situations with avoidant behaviours more than females do (Carver, Scheier, & Weintraub, 1989), who use more approach oriented coping strategies than males do (Herman-Stahl, Stemmler, & Petersen, 1995). This would mean that females would tend to score more highly on the CES-DS than males, suggesting that females are at higher risk of depression than males and thus giving incorrect results.

Another issue with the measurement in previous studies is that researchers have used questionnaires with low validity (Wade & Pevalin, 2004). This questions the ability of the research to be applied to the real world. Furthermore, previous research has only explored a small range of mental health issues in their studies such as depression or anxiety, which does not comprehensively cover the emotions that can develop through a stressful situation (Bruce & Kim, 1992) such as stress, suicidality and avoidant behaviours.

Thirdly, few studies have controlled for other life events that may have predicted depression in their samples (e.g., Aseltine & Kessler, 1993; Kendler et al., 1995). The current studies will address this limitation by controlling for the participants' lifetime histories of

mental health issues and suicidality, and their family histories of mental health issues and suicidal ideation. Neglecting to control for lifetime and family histories of depression and other extraneous variables leaves the impact of negative marital events open to question. Therefore, the current studies will assess and statistically control for other variables which may precipitate mental health issues, in order to increase the internal validity of the results.

Procedure

There have also been some procedural limitations in previous studies. Unfortunately, most studies have been retrospective or cross-sectional in design, limiting the generalisability of the results. Secondly, most of the previous research only measures the adjustment to separation once after separation. This may give inconsistent results. For example, as previously stated, Strohschein et al. (2005) suggested that males and females who separate proceed along similar paths in adjusting to the separation. However, over time, secondary stresses such as decreased income may act to impede the recovery from mental health issues (particularly in females).

Alternatively, females may be more depressed than males early in the transition from being married to being separated, but the differences even out as time goes by (Bruce & Kim, 1992). This would mean that the time when the researchers conducted their interviews (typically early in the transition) could bias their results. Finally, some studies in this area of research do not consider confounding variables. For example, forgiveness, attachment styles, who initiated the separation and so on, may all relate to the level of mental health issues a parent may experience after separation.

The current studies endeavour to eliminate the limitations of previous research. This will be done by recruiting a large sample of parents (100+) who are nationally representative and who are as evenly split sex-wise as possible. These studies will also only recruit those

who have separated within the previous two years. Another sampling limitation that will be eliminated in this research is that it will not just investigate those parents who have been lawfully married. Those who have been in de facto relationships will also be recruited in order to avoid specialization of the sample.

These studies will also eliminate measurement limitations. This will be done by using a range of questionnaires that can capture the differing responses to separation a mother and father may have experienced (for example, depression scales as well externalizing behaviour scales) which aims to capture responses of mental health issues from both sexes. The questionnaires that will be used will be well-established reliable and valid questionnaires and will cover a variety of mental health issues and a variety of parenting variables. Furthermore, these studies will be beneficial as it will look at the participants over time, unlike previous research which has a bias "single shot" picture of separation. These studies will also try to establish and control for confounding factors as well as make the results relevant to a New Zealand population. Finally, the best methodological technique for data collection will be employed. The next section provides a review of the literature which advocates the employment of a web-based survey methodology, for use in the current circumstances.

3. Web-based Survey Literature Review

One way to collect data from participants is to create a web-based survey which participants can complete online. The alternatives to this approach would be to conduct interviews either in person or on the telephone or to distribute surveys to be completed by hand. With the time and practical constraints of a Master's thesis in mind, the literature suggests that a web-based survey would be the most efficient method for the least biased participant responses and also for better participant recruitment, in terms of representativeness, sample size and sample retention.

Advantages of Web-based Surveys

There has been a substantial amount of research into the effectiveness of web-based surveys due to the growing prevalence of this methodology for academic research and for obtaining better responses on sensitive topics such as substance use. Some research suggests that there are no major differences in the data collected by web-based surveys or by more traditional methods (Krantz, Ballard & Scher, 1997; Krantz & Dalal, 2000). However, other research has found that, because computerized methods (such as web-based surveys) reduce the social desirability response, they are more successful at obtaining reliable information on sensitive topics (Joinson, 1999; Tourangeau, 2004).

Other studies find that computerized or telephone responses generate higher response rates when investigating sensitive topics (such as alcohol and drug use and other mental health issues) due to the anonymity and confidentiality of the responses (Parks, Pardi, & Bradizza, 2006; Reddy, Fleming, Howells, Rabenhorst, Casselman, & Rosenbaum, 2006; Rogers, Miller, & Turner, 1998). Furthermore, Knapp and Kirk (2003) found no differences in responses on a sensitive subject among mail surveys, automated telephone surveys and web-based surveys, and McCabe, Boyd, Couper, Crawford and Darcy (2002) found higher response rates for web-based surveys compared to mail surveys, with no differences in the quality of the results. McCabe et al. (2002) also found no differences in reliability and validity between the two methods and this finding is supported in a study by Braunsberger, Wybenga, and Gates (2007).

Further advantages of web-based surveys and mail surveys include that they can be accessed and completed by participants in their own time, 24 hours a day; they are able to provide personal feedback to participants; and they can send personalised reminders in order to increase the retention rate for multiple surveys (Goritz, 2008). However, web-based surveys have further advantages over mail surveys. Web-based surveys are quick and simple

(Archer, 2003); and allow the researcher to individualise the survey to include or exclude questions relevant for particular participants (Alvarez & Van Beselaere, 2004; Joinson & Reips, 2007; Mitra, Jain-Shukla, Robbins, Champion, & Durant, 2008). Furthermore, there are no travel, postage, research or training costs for the researcher or the participant in a web-based survey which means it is less time consuming and less costly, as well as making participants more inclined to complete it due to its ease and convenience (Dillman, 2000; Mitra et al., 2008). It has been found that web-based surveys also allow participation by a large number of people at a low cost over a short time period, while still maintaining the integrity of the data (Parks et al, 2006).

Another benefit of web-based surveys over mail surveys is that they allow easy and fast transcription of the results into a data analysis programme, which reduces time, cost and human error (Archer, 2003; Ardalan, Ardalan, Coppage & Crouch, 2007). Furthermore, statistics from the data can be readily available from the web-based survey provider, which allows for the researcher to check the representativeness of the sample while recruiting participants (Archer, 2003).

A final advantage of web-based surveys is that the recruitment process of advertising online and via email with a simple link to the survey makes the survey readily accessible (Dillman, 2000). Therefore, after looking at the advantages of using a web-based survey for the methodology makes this process more advantageous than using mail surveys.

Disadvantages of Web-based Surveys

There have been disadvantages that have been found when using web-based survey methodology, but as previously stated, they are outweighed by the advantages or are easily manageable. There are obvious sampling biases in web-based surveys in that all potential participants must have access to the internet (Dillman, 2000). Therefore, the validity of the

data collected may be compromised, as samples are not truly randomly obtained. A lack of computer literacy or other technical problems may further bias the sample (Dillman, 2000; Mitra et al., 2008). However, as long as the representativeness of the sample is comparable with the population under investigation this is an acceptable limitation.

Mitra et al. (2008) suggested that it is possible that participants might deliberately falsify information given the anonymity of web-based surveys and as discussed previously, there may be a lower response rate than there may be to mail surveys. However, as long as a sufficient sample size is recruited then this should not be a problem. Furthermore, there is no convincing evidence that the data obtained via a web-based survey should be any less reliable than via a mail survey, and McCabe et al. (2002) found no differences in reliability and validity between web-based surveys and mail surveys.

Dillman (2000) also suggests some further disadvantages of a web-based survey design. He states that sampling of email addresses is difficult, but for the current studies, many email databases can be accessed. Two viable disadvantages are that screen configurations may corrupt the format of the survey due to individual computer settings (Dillman, 2000) and that the decision not to respond is likely to be made more quickly (Archer, 2003).

A meta-analysis of 39 studies comparing the response rates of web-based surveys and mail surveys found that generally, web-based surveys have a 10% lower response rate than mail surveys (Shih & Fan, 2008). However, this meta-analysis was not a true representation of published articles on this subject, as some of the articles included in the meta-analysis had not been published. Furthermore, Spijkerman, Knibbe, Knoops, van de Mheen and van den Eijnden (2009) found evidence to suggest that online surveys showed more non-response and coverage bias than when the questionnaire was administered on a computer by a virtual

interviewer. They suggested that the results from the online survey were finding less reliable estimates of substance use in the general population than computer-assisted interviews were.

The employment of a methodology using personal interviews via the telephone or in person (with or without computer assistance) is not practical in terms of the time and cost restraints of this Master's thesis. In order to get a large sample size with sufficient power to detect effects, many interviews must be conducted. Considering the time required to train interviewers as well as conduct hour-long interviews, the task is almost impossible, especially as the present studies endeavoured to take measures at two time points across five months. In addition, there are significant constraints on recruiting participants from the population of separated parents: participants may be unwilling to talk face-to-face about this difficult topic; making a convenient time to meet can be problematic; and participants would be restricted to Christchurch. Those constraints contributed to a decision to employ a web-based survey for these studies.

Methodological Recommendations for Web-based Surveys

Previous research has made recommendations as to how to create the survey in order to get the best results. Recommendations include giving a fair estimate of the time it will take to complete the survey (Galesic & Bosnjak, 2009), to have a relatively long deadline for participants to complete the survey within (Goritz & Steiger, 2009), the survey must be as short as possible, clear, provide a welcome that is motivational and instructional with easy instructions, and provide a navigation that is quick, clear and easy (Dillman, 2000). Some research suggests that a pre-notification email may increase response rate and short reminders will also help response rate. Email reminders should be sent every 8-10 working days after the first invitation (Mitra et al., 2008).

Studies have suggested that incentives should be used, and that the type of incentive does not seem to be important (Goritz, 2006). One study also suggests that the use of milestone markers which indicate how long a participant has left to go may raise the rate of completion of surveys (Singh, Taneja, & Mangalaraj, 2009). As a web-based survey methodology will be used in these studies, these recommendations will be employed in order to enhance the quality of methodology to the highest possible level.

Finally, it is important to note that all methodologies come with their advantages and disadvantages. Thus avoiding disadvantages is not important; instead it is important to choose the most beneficial methodology possible. It is clear that the advantages a web-based survey can bring to the methodology outweigh the risks involved, and in these circumstances, a web-based survey method will be more beneficial than a mail survey, a telephone survey, and face-to-face interviews. Therefore, a web-based survey methodology will be employed in order to investigate the mental health and parenting practices of recently separated parents in New Zealand.

4. The New Zealand Context

In New Zealand, marital dissolution occurs in almost one third of those who marry (Bascand, 2008) and overseas estimates have been as high as fifty percent (Kneip & Bauer, 2009). A total of 10,933 individuals went through a marital dissolution through the Family Court in 2004. Between August 2007 and July 2008, the Family Court in New Zealand granted 10,064 marital dissolutions (Boshier, 2008). Additionally, in 2008, there was a mean of 1.8 children involved per marital dissolution in New Zealand which suggests that a large portion of marital dissolutions involve parents with children (Statistics New Zealand, 2008). In 2009, there were another 8737 marital dissolutions.

Furthermore, these data only include those who have exited a lawful marriage and do not include those who have separated from a de facto relationship. In 2006, one in five adult partnerships were not legal marriages (Bascand, 2010). Furthermore, nearly half of all children in New Zealand are born out of wedlock (Pryor & Rodgers, 2001). Thus, these numbers are an under-estimate of the number of couples and children who experience separation in New Zealand each year. These statistics also underscore the necessity for high quality research with this group of people as separation and marital dissolution are common phenomena; a significant number of vulnerable parents and children are involved; and there is a lack of research in this area, especially in New Zealand.

5. The Current Studies

Not only are there large numbers of people affected by separation in New Zealand, there are also significant mental health risks and changes in parenting practices associated with separation. The present studies investigated these phenomena, at the same time addressing some of the methodological limitations of existing studies. The aim was to recruit a relatively large sample size (n=100+) including both males and females, and assess the mental health and parenting practices of these participants with a web-based survey. The survey included questionnaires about mood disorders, anxiety disorders, substance abuse disorders, and parenting practices. The questionnaires chosen have established reliability and validity; the surveys were administered twice over five months; and participants all had separated within the previous two years. The longitudinal nature of Study 2 allowed for the assessment of change over time. These studies were the first of their kind in New Zealand, making a significant contribution to the literature.

These quantitative studies each had four aims. The first aim of Study 1 was to provide an overview of sample characteristics. The second objective of Study 1 was to describe the

mental health of those who are recently separated. Within this aim, this study sought to describe the prevalence of mental health issues in this sample; to investigate predictors that may be related to mental health; and to investigate sex differences in mental health. The third objective of this study was to describe the parenting practices of recently separated parents. Within this aim, this study sought to describe the parenting practices in this population, investigate predictors related to parenting and to investigate sex differences. Finally, the last aim of Study 1 was to investigate the relationship between mental health and parenting variables cross-sectionally.

Table 3
Outline of Current Studies

Study 1	
Aim	**Sub-aim**
1. Sample characteristics	
2 Describe the mental health of those who are recently separated:	2.1 Describe the prevalence of mental health issues in this sample.
	2.2 Investigate predictors that may be related to mental health issues.
	2.3 Investigate sex differences in mental health issues.
3. Describe the relationship between separation and parenting variables:	3.1 Measure the parenting practices in this population.
	3.2 Investigate predictors that may be related to parenting practices.
	3.3 Investigate sex differences.
4. Investigate the relationship between mental health and parenting variables cross-sectionally at Time 1.	
Study 2	
Aim	**Sub-aim**
1. Sample characteristics	
2. Assess changes in mental health in this sample over five months.	Within this aim, sex differences in mental health status were explored.
3. Investigate any changes in parenting variables over five months.	Within this aim, sex differences in parenting variables were explored.
4. Investigate the relationship between mental health and parenting variables longitudinally over a five month period.	Within this aim, sex differences in the relationship between mental health status and parenting variables were explored.

There were four aims in Study 2. The first aim was to provide an overview of the sample characteristics. Secondly, this study aimed to assess any changes in mental health over five months. The third aim was to assess changes in parenting over a five month period. The final aim was to investigate the relationship between mental health and parenting

variables longitudinally over five months. Table 3 displays the outline of each study and its aims.

These studies provide an in-depth analysis of a sample of recently separated parents in terms of their mental health and their parenting practices. There is no single response that a parent has to a separation; some cope well with the change whereas others may have long periods of poor adjustment. These studies investigate the factors that may identify those at higher risk of poor adjustment. Furthermore, any changes in parenting practices and mental health are explored, and the relationship between mental health and parenting variables is investigated.

Method

1. Study 1

Participants. Participants could be of any age, sex, ethnicity, or sexual orientation. Participants needed to be currently living in New Zealand, parent at least one child (did not have to be a biological child), and be separated from the other parent of their child/ren within the previous 24 months. One hundred and forty separated parents completed the first survey. Of the final group of 112 participants meeting all of the inclusion criteria, 73% (82) of the respondents were female and 27% (30) were male. The ages of the participants ranged from 21 years to 58 years with a mean of 37.5 years. The ethnicities of the participants were as follows: NZ European 76.8%, Maori 12.5%, Australian 1.8%, Other European 1.8%, Asian 1.8% and Pacific Islander 1.8% and Other 4.5%. Participants in this sample were from a range of cities in New Zealand: Auckland 33.9%, Wellington 21.4%, Christchurch 24.1%, Dunedin 4.5%, Tauranga 5.4% and Hamilton 10.7%. The employment status of the participants was: Full-time 39.3%, Part-time/Casual 29.5%, Voluntary 1.8%, Homemaker 19.6%, Student 4.5% and Unemployed 5.4%.

Procedure. Participants in Study A were recruited via media advertisement. Advertisements were placed in the local Christchurch newspaper "The Press"; on multiple parenting websites (Littlies, Kiwi Families, Christchurch Psychology); and parenting websites which sent emails to their members advertising the study (Littlies, Kiwi Families). Advertisements were conducted through men's organisations around New Zealand to increase the response rate from males (GetFrank, NZFamilies, Men's Clinic). Once participants completed two surveys they were entered into the draw to win one of three $100 vouchers (for shopping or petrol). All advertisements displayed a website address for the participants to use in order to access the web-based survey website.

The survey. The web-based survey programme utilized University of Canterbury's software "LimeSurvey". Once participants accessed this website, they entered a first name and email address. The website automatically sent an email to their email account which contained a website link directing them to "The mental health and parenting practices of recently separated parents" first survey (Study A). To ensure anonymity when the participant signed up for Survey One, they were given a random token number by which the researcher identified them during the analysis. The LimeSurvey website allows the researcher to easily send emails to the participants to invite and remind them about the survey.

Before completing the survey respondents were given information regarding the study such as the outcomes, conditions of participation and so forth (see Appendix A). Participants were informed that they could withdraw their responses if they wished to, up until the time that their survey data had been added to the database. The survey included 65 questions, which took approximately 20 minutes to complete. The questions covered demographics, personal background, parenting variables, mental health background, current mental health, alcohol and drug use (see Appendix B). All questions were mandatory and no questions could be left unanswered before progressing to the next page of questions.

All Study A responses from participants were obtained in April and May (2010). On completion, participants were thanked and told that the principal researcher would be in contact in five months time, when it was time to complete the second survey (Study B).

2. Study 2

Participants. Of the 112 participants who responded to Study A, 88 completed Survey 2. In this group, 66 (75%) of the respondents were female and 22 (25%) of the respondents were male. There were no significant differences in the demographic data of Sample Two as opposed to Sample One. Any further differences that were found will be discussed in the results section.

Procedure. Participants were notified by email five months after Survey 1, when Survey 2 was available to complete. Participants had from the 28th of September to the 31st of October to complete Survey 2 and were sent one email invitation and four email reminders about the survey over the five weeks that it was available.

Firstly, participants were directed to an information page (see Appendix C). There were 48 questions to be completed in the second survey taking approximately 15 minutes to complete. The questions covered demographics, personal background, parenting variables, mental health background, current mental health, alcohol and drug use. For participants living in Canterbury who experienced the Canterbury Earthquake, there was an additional section of questions to complete. See Appendix D to view Survey 2.

3. Measures

The two surveys consisted of a series of mental health, parenting practice, and other scales, supplemented by custom-written interview questions. Measures selected for inclusion were required to meet the following criteria; 1) suitable for use with a large sample, 2) could

be used for parents of different ages, caring for children of different ages, 3) was available in the public domain and 4) had satisfactory reliability and validity. Descriptions of scales and other complex measures are provided, followed by the coding of questions and descriptions of computed variables. The internal reliabilities of the scales used in this study were satisfactory and are reported later in the Results section. The way in which the final measures of each construct were produced for use in statistical analyses are described more fully in Table 4.

Depression, Anxiety and Stress Scale - 21 (DASS) (Lovibond & Lovibond, 1995). The DASS-21 is a measure of distress along the axes of depression, anxiety and stress (see item C4, Appendix B). This scale is a short version of the Depression and Anxiety Scale (Lovibond & Lovibond, 1995) and has high reliability on each subscale (Imam, 2007) and has moderate convergent and discriminant validity findings (Imam, 2007). Participants were instructed to "Read each statement and choose how much the statement has applied to you over the past week", with a rating scale of 1 (Applied to me to a small degree) to 5 (Applied to me most or all of the time). Sub-scale scores were created for depression, anxiety and stress. Items used for each subscale are shown in Appendix E. See Table 5 for final construction of the '*mental health'* dependent variable.

Michigan Alcohol Screening Test (MAST) (Selzer, 1971). The MAST was used to measure the level of problem drinking (see item C7, Appendix B). This scale has good reliability (Gibbs, 1983) and validity (Teitelbaum & Mullen, 2000). Participants responded 'yes' or 'no' to each item in the MAST. Each 'yes' answer was coded as '1' and each 'no' item was coded as '0', except for items one and four where a '1' was allocated for each 'no' answer and a '0' was coded for each 'yes' answer. The total score was summed across all items. Previous research has suggested that a score of 5 or more should be used to distinguish those with a drinking problem from those without a drinking problem, while maintaining the

most specificity and sensitivity (Teitelbaum & Mullen, 2000). Thus, those with a score of 5 or more were identified as having a drinking problem when used as a categorical variable. See Table 5 for final construction of the '*substance use'* dependent variable.

Drug Abuse Screening Test (DAST) (Skinner, 1982). The DAST was used in order to measure the level of drug use (see item C9, Appendix B). This scale has good reliability (Yudko, Lozhkina, & Fouts, 2007) and validity (Staly & El-Guebaly, 1990). Participants responded 'yes' or 'no' to each item with each 'yes' answer coded as '1' and each 'no' item was coded as '0', except for items four and five where a '1' was allocated for each 'no' answer and a '0' for each 'yes' answer. Research has shown that a score of 6 should be used in order to distinguish those with problematic drug use from those without problematic drug use while allowing the most specificity and sensitivity (Staly & El-Guebaly, 1990). Therefore, those with a score of 6 or more were identified as having a drug-use problem in these studies.

Subjective wellbeing. The following two items were taken from the DSM-IV Text Revised (American Psychiatric Association, 2000) "Have you had a period where you felt sad, blue and depressed almost every day?", and "Have you lost interest in most things like work, hobbies or things you usually enjoy?" Participants also rated their anxiety and stress levels with the following items created for this study; "Have you had a period of a month or longer during which you felt anxious, tense or worried most of the time?" and "Have you had a period of a month or longer during which you felt extremely stressed most of the time?" Each 'no' answer was coded as a 1 and the four items then added to create a variable called '*subjective wellbeing*' (see Table 5 for more information). The lower the score, the poorer the mental health or wellbeing.

Authoritative Parenting Scale (APS; King, Kraemer, Bernard & Vidourek, 2007.) The APS measures authoritative parenting style present in a parent and is a measure of

positive parenting and negative parenting (see item B6, Appendix B). This scale has good reliability and validity (King et al., 2007). Words in the items of the scale were adapted to be more relevant to biological parents as opposed to foster parents. Participants rated how much they agreed with each statement on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. Items 13 to 20 were reverse scored. As a result of a factor analysis on the scale with the current sample, items 13, 14 and 15 were removed from the scale as they did not load highly on the scale. See Table 10 for final construction of the '*positive parenting'* and '*negative parenting'* dependent variables.

***Positive parenting*.** Items 1-12 compiled the 'positive' parenting subscale. The scores of the items on this subscale were averaged in order to create a positive parenting score. The higher the positive parenting the more positive the participant's parenting.

***Negative parenting*.** Items 16-20 in the APS compiled the unfavourable or 'negative' parenting subscale. The scores on this subscale were averaged in order to create a negative parenting score. The higher the score, the more negative the participant's parenting.

Parenting Self-Efficacy Scale (Johnston & Mash, 1989). The Parenting Self-Efficacy subscale from the Parenting Sense of Competence Scale (see item B7, Appendix B) was used and has high validity (Ohan, Leung, & Johnston, 2000) and reliability (Johnston & Mash, 1989). Participants rated how much they agreed with each statement on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. The ratings were summed and an average score was calculated in order to represent a participant's level of parenting self-efficacy. Factor analysis of the data from this sample confirmed one component within this scale.

The Forgiveness Scale (Rye, Loiacono, Olck, Olszewski, Heim & Madia, 2001). The Forgiveness Scale was used to measure the level of forgiveness participants had towards their ex-partner (see item A10xi, Appendix B). This questionnaire has good reliability and validity (Rye et al., 2001). Participants rated how much they agreed with each statement on a

scale of 1-5 where 1= strongly disagree and 5= strongly agree. Items 1, 3, 4, 5, 8, 10, 12, and 14 were reverse scored and Item 6 was removed after factor analysis was completed. A mean score representing the level of forgiveness they had towards their ex-partner. The higher the score, the more the participant had forgiven their ex-partner (or the lower the score, the more resentment they have towards ex-partner).

Adult Attachment Questionnaire (Simpson, Rholes & Nelligan, 1992). This questionnaire (see item A15, Appendix B) has acceptable reliability (Simpson et al, 1992) and validity (Crowell, Fraley, & Shaver, 1999). Participants rated how much they agreed with each statement on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. Items 4 and 12 were reverse scored. This scale produces three attachment scores: secure, avoidant, and anxious. However, research with attachment scales has routinely revealed that the items form two factors, with the avoidant and secure items anchoring one dimension and the anxious items forming an independent dimension. Thus, the avoidant/secure attachment index was created by subtracting the mean avoidant score from the secure mean. The higher this index, the more securely attached the participant's style. Items 4 and 10-13 were averaged in order to determine the level of anxious attachment. Higher scores represent higher levels of anxious attachment.

Coding of remaining variables. For a description of how all variables in the survey were coded see Appendix F.

Dependent variables. A total of six dependent variables were developed partly based on factor analysis and psychometric analyses. Table 4 displays the zero-order correlations among the mental health measures, showing they are moderately to strongly positively associated. In other words, the more symptoms a participant reported on the depression scale, the more symptoms they reported on the anxiety and stress scales, and the lower they scored on the subjective wellbeing scale. A decision was made to combine the depression, anxiety

and stress scales [along with the variable '*life interference of mental health*' (see Appendix F)] to form one '*mental health*' factor, given that the correlations among these dependent variables and the independent variables were very similar. Therefore, no information was lost in the development of one '*mental health*' factor, yet reliability of the results and the level of statistical power in the analyses were increased. Factor analysis results supported the construction of this composite variable, with all factors loading on one generic factor. However, the participants' '*subjective wellbeing*' score was kept as a separate dependent variable.

'*Suicidal ideation*' was also kept as a separate dependent variable as it did not correlate with the other mental health measures and due to the importance of distinguishing separate predictors for this area of mental health.

Table 4
Zero-Order Correlations among Mental Health Measures at Time 1

Variable	Subjective Wellbeing	DASS Depression	DASS Anxiety	DASS-Stress	Life Interference of Mental Health	Suicidal Ideation	Alcohol Use
DASS- Depression	-.45**						
DASS-Anxiety	-.43**	.59**					
DASS-Stress	-.41**	.68**	.55**				
Life Interference of Mental Health	-.43**	.53**	.49**	.25*			
Suicidal Ideation	.00	.15	.09	.10	.19		
Alcohol Use	-.05	.03	.07	.12	.00	.12	
Drug Use	-.05	.00	.11	.08	.05	.07	.30**

Note:
* $p \leq 0.05$, ** $p \leq 0.01$

Alcohol and drug use were combined to create a '*substance use*' factor as they correlated significantly, and had similar associations with independent variables. Factor analysis supported the construction of this composite variable. See Table 5 for a description of how each mental health dependent variable was constructed.

Table 5 ***Description of Dependent Variables***	
Subjective Wellbeing	This is the participants' subjective wellbeing rating.
Mental health	On the basis of a factor analysis to analyze this scale, a composite variable was created by combining the scores on the depression, anxiety and stress subscales, and the level that depression, anxiety or stress has interfered with the participant's life. The variables were initially converted to z-scores and then summed. The higher the score, the poorer the participant's mental health.
Suicidal Ideation	This is the score on the continuous suicidal ideation scale the participants had.
Substance use	This is a composite variable of the summed scores of the level of alcohol use and drug use the participants had. The scores were transformed to z-scores and then summed. The higher the score, the higher the participant's use of substances.
Positive parenting	This is a composite variable of the summed scores of the level of positive parenting (taken from the score on the positive parenting sub-scale of the APS) and parenting self-efficacy score. The mean scores of the variables were converted to a z-score and then summed. The higher the score the more positive the participant's parenting.
Negative parenting	This is the score on the negative parenting sub-scale of the Authoritative Parenting Scale described above. The mean scores of the negative parenting subscale were converted to z-scores. The higher the score, the more negative the participant's parenting.

As parenting self-efficacy and positive parenting were significantly correlated (see Table 6), and because previous research suggests that parenting self-efficacy is a strong indicator of positive parenting ability (Coleman & Karraker, 1998; Jones & Prinz, 2005), they have also been combined to create one '*positive parenting*' variable. Again, the construction of this dependent variable was supported by the results of a subsequent factor analysis. Negative parenting was kept as a separate dependent variable due to it not associating with the other parenting measures. A description of how these parenting dependent variables were constructed is shown in Table 5.

Table 6 ***Zero-Order Correlations among Parenting Measures***		
Variable	**APS – Positive Parenting**	**APS- Negative Parenting**
APS-Positive Parenting		
Negative Parenting	.04	
Parenting Self-efficacy	.39**	.09
Note: ** $p \leq 0.01$		

The final six dependent variables were '*subjective wellbeing'*, *'mental health'*, *'suicidal ideation'*, *'substance use'*, *'positive parenting'* and *'negative parenting'*. These dependent variables were used in all analyses except descriptive analyses and were

constructed identically in both Study A and Study B. Table 7 below shows the correlations among the final dependent variables and their means and standard deviations at Time 1.

Table 7
Zero-Order Correlations among Dependent Variables and their Means and Standard Deviations(SD)

Variable	Mean(SD) Time 1	Subjective Wellbeing	Mental Health	Suicidal Ideation	Negative Parenting
Subjective Wellbeing	1.75(1.53)[a]				
Mental Health	0.00 (3.32)[b,c]	-.55**			
Suicidal Ideation	0.30 (0.70)[d]	.00	.14		
Substance Use	0.00 (1.61)[b, e]	-.06	.06	.12	
Positive Parenting	0.00 (1.67)[b, f]	.05	-.10	.04	.08
Negative Parenting	1.96(0.81)[g]	.22*	.01	.04	

Note: [a]= Score range, 0.00-4.00, [b]= Means and standard deviations of summed z-score transformations, [c]= Score range, -4.77-10.57, [d]= Score range, 0.00-3.00, [e]= Score range, -1.00 to 6.53, [f]= Score range, -3.88 to 3.37, [g]= Score range, 1.00-5.00. *$p \leq 0.05$, ** $p \leq 0.00$

Independent variables. Independent variables were kept separate for the majority of statistical analyses in order to provide more detail of which predictors were associated with mental health or parenting adjustment post-separation. These predictors are described in Appendix F and the correlations among the separate significant independent variables, as well as their means and standard deviations at Time 1 are shown in Table 8.

Table 8
Zero-Order Correlations among Significant Predictors and their Means and Standard Deviations (SD)

Variable	Mean (SD) Time 1	Time since separation	Life interference	How much did you want the final separation	Current financial situation	Level of education	Anxious Attachment	Secure Attachment	Level of forgiveness	Positive short term	Positive long term	Mental Health History
Time since separation	9.82 (6.31) [a]											
Life interference of Mental Health	3.63 (2.78)[b]	-.09										
How much did you want final separation	3.22 (1.53)[c]	-.03	-.17									
Current financial situation	2.21 (0.97)[d]	-.11	**-.24***	-.03								
Level of education	2.00 (1.02)[e]	.08	**-.20***	-.12	**.27****							
Anxious attachment	2.71 (0.68)[f]	-.01	**.39****	-.11	-.06	**-.26****						
Secure Attachment	0.18 (1.42)[g]	-.13	**.20***	-.10	-.14	**-.36****	**.32****					
Level of forgiveness	3.30 (0.82)[h]	.07	**-.32****	.19	-.07	.16	**-.43****	**.25****				
Positive life change short-term	0.70 (0.46)[i]	.00	**-.24***	**.54****	-.01	-.04	-.11	.14	**.35****			
Positive life change long term	0.93 (0.26)[j]	.09	**-.20***	**.34****	.10	.10	-.14	.17	-.11	**.27****		
Mental Health History	0.00 (3.21)[k]	-.07	**.38****	-.01	-.08	-.08	**.29****	**-.27****	-.01	-.09	-.02	
History of substance abuse	0.40 (0.74)[l]	-.05	.15	.15	-.01	-.12	**.23***	-.06	-.17	.02	.01	**.53****

Note: [a]= Range of time since separation, one week to two years, [b]= Score range, 0.00 to 9.00, [c]= Score range, 1.00 to 5.00, [d]= Score range, 1.00 to 5.00, [e]= Score range, 0.00 to 4.00, [f]= Score range, 1.00 to 4.60, [g]= Score range, -3.67 to 3.33, [h]= Score range, 1.36 to 4.79, [i]= Score range, 0.00 to 1.00, [j]= Score range, 0.00 to 1.00, [k]= Z-Score transformation, Score range, -5.08 to 8.01, [l]= Score range, 0.00 to 2.00.
* $p \leq 0.05$, ** $p \leq 0.01$

Table 9
Zero-Order Correlations among Composite Predictor Variables and their Means and Standard Deviations (SD)

Variable	Mean (SD) Time 1	Sex	Level of education	Time since separation	Thoughts on separation	Relationship with ex-partner	Level of support	Mental Health History	Anxious Attachment	Secure Attachment
Level of Education	2.00 (1.02)[a]	.02								
Time since separation	9.82 (6.31)[b]	**-.25****	.08							
Thoughts on separation	0.00 (3.39)[c,d]	.16	-.01	-.01						
Relationship with ex-partner	0.00 (3.11)[c,e]	-.01	.03	.04	-.08					
Level of support	0.00 (2.84)[c,f]	.01	.09	.11	.11	-.02				
Mental Health history	0.00 (3.21)[g]	.10	-.08	-.07	-.02	**-.23***	-.23			
Anxious Attachment	2.71 (0.68)[h]	**.21***	**.26****	-.10	-.08	**-.21***	**-.29****	**.29****		
Secure attachment	0.18 (1.42)[i]	**-.24***	**.36****	.13	.13	.14	**.29****	**-.27****	**-.32****	
Relationship with child	0.00 (2.30)[j]	**.49****	-.06	.05	.05	-.02	.02	.03	**.23***	-.17

Note: [a]= See Appendix F for coding and score range of all variables, [b]= Range of time since separation, one week – two years, [c]= Means and standard deviations of summed z-score transformations, [d]= Score range, -9.70 to 4.57, [e]= Score range, -7.33 to 4.63, [f]= Score range, -5.64 to 6.46, [g]= Score range, -5.08 to 8.01, [h]= Score range, -2.52 to 2.79, [i]= Score range, -3.67 to 3.33, [j]= Score range, -5.59 to 2.64.
*$p \leq 0.05$, ** $p \leq 0.01$

However, a total of 11 independent variables were established via factor analysis for statistical analyses requiring more power (such as multiple regression). Correlations among these independent variables are shown in Table 9 which also displays the means and standard deviations at Time 1 for the independent variables developed for the multiple regression analyses. These predictors were constructed identically in both Study A and Study B and a description of how each independent variable was constructed can be viewed in Table 10.

Table 10 ***Description of Independent Variables Developed with Factor Analysis***	
Independent variables used in statistical analyses requiring more power	
Sex	Sex was selected due to the difference between male and female response rates. Coded as Male=1, Female=2
Education	It is important to have a covariate that controls for socio-economic status. Level of education is a reliable measure of socio-economic status (Dohrenwend et al., 1992).
Time since separation	As the participants had separated for different lengths of times, time since separation was entered in to control for this, and to assess if any dependent variables change over time.
Positive thoughts – on separation	This variable measured how positively a participant thought about the separation. This was created using the scores of how involved they were in the initiation, how satisfied with the relationship they were in, and whether they thought it will be a positive change for the short and/or long term. The variable "how involved were you in the initiation?" was reverse coded and all variables were converted to z-scores then summed. The higher the score, the more positive the thoughts on the separation.
Positive relationship with ex-partner	This variable measured the positivity of the relationship with their ex-partner post-separation. Level of conflict (reverse coded), level of forgiveness, ease of reaching a day-to-day care plan, and involvement in family court (reverse coded) made up this variable. Then all variables were converted to z-scores and summed. The higher the score, the more positive the relationship.
Support	This variable was created by summing the scores of how much practical support and emotional support they received, how much time per week they spent with a supportive person and how many friends/family members they could count on for support. Variables were converted to z-scores and summed. The higher the score, the more support they received.
Mental Health History	If the participant indicated any history of mental health issues, these were summed to make a score indicating the level of severity of history of mental health issues. The variables were changed to z-scores before they were summed.
Secure attachment	This score was taken straight from the secure attachment dimension from the AAQ.
Anxious attachment	This score was taken straight from the anxious attachment dimension from the AAQ.
Relationship with child	This variable was created by combining the scores from time spent with children now, post-separation relationship with the child, and day-to-day care plans. All variables were transformed to z-scores before summing them together. The higher the score, the more positive the relationship with the child.
Canterbury Earthquake	In Study 2, whether a participant had experienced the Canterbury Earthquake or not, was controlled for in the multiple regression analyses.

4. Missing Data and Sample Selection

There were no missing data in the results obtained from either Survey 1 or Survey 2. This is because, as noted previously, the web-based survey did not allow participants to leave a question unanswered and participants could not proceed unless they had completed all questions.

5. Power Calculations

Meehl (1990) stated that most psychological research has inadequate statistical power to detect real differences at the conventional significance level which is largely a consequence of relatively small sample sizes. Given the need to generate sufficient power to be able to reliably detect effects in the present studies, power calculations were carried out with an online statistical power calculator (Soper, 2011). The programme allows the user to compute, a priori, the total sample size needed for particular data analytic methods given an estimated effect size, a stipulated alpha value, and a desired power value. Should the actual sample size fall short of that needed to achieve a particular power value, the programme allows the user to compute, post hoc, the power value given the actual sample size and a stipulated alpha value. In order to make the a priori calculations, an estimated effect size was required.

There was very little information in the literature about such effect sizes given that there are virtually no studies relating to the relationships being investigated in the current studies. Hallahan and Rosenthal (1996) recommended that, in cases where there is very little information in the existing literature on which to make estimates of effect sizes that might be expected in a particular study, "it may not be unwise to make an educated guess about the size of the expected effect" (p.493). Therefore, educated guesses were made about the expected effect sizes in the present studies, and, generally speaking, medium sized effects were predicted.

For each of the following tests, effect sizes were stipulated from Table 1 in Cohen (1992).

1. *t*-tests: With an estimated effect size (ES) of .50 (small ES = .20; medium ES = .50; large ES = .80), alpha = .05, and a desired power value of .80, the total sample size needed is 128. The actual sample size in Study 1 was 112 which satisfied the sample size requirement, but the sample size in Study 2 was only 88. Post hoc calculations with the two sample sizes produced power values of .71 and higher.

2. Correlations: With an estimated effect size of .30 (small ES = .10; medium ES = .30; large ES = .50), alpha = .05, and a desired power value of .80, the total sample size needed is 64. All three studies satisfied the sample size requirement.

3. Multiple regression: With an estimated effect size of .15 (small ES = .02; medium ES = .15; large ES = .35), alpha = .05, four predictors, and a desired power value of .80, the total sample size needed is 84. The sample size in Study 1 was 112 and the sample size in Study 2 was 88, which satisfied the sample size requirement. Post hoc calculations with the two sample sizes produced power values of 0.80 and higher.

Thus, power values for these studies ranged from .71 to greater than .80, (except for one power value of 0.30 resulting from a repeated measures t-test assessing parenting-self efficacy over time). In terms of the convention proposed for general use by Cohen (1988; 1992), which was a power value of .80, these values are considered to be satisfactory when applied to medium sized effects.

Results

The results are presented separately for Study 1 and Study 2. In the following section (Study 1), first an overview of sample characteristics is provided. Second, the mental health of those who are recently separated is described, and the predictors of mental health including sex are investigated. Third, the parenting practices of recently separated parents are described, and the

predictors of parenting practices including sex differences are investigated. Finally, the relationship between mental health and parenting variables will be investigated cross-sectionally.

Before the statistical analyses proper were carried out, the data were cleaned and the variances were examined to establish reasonable normality. To correct for skew, some variables were transformed using log10. The variables that were transformed were the subscale scores and the overall scores for the DASS-21, the MAST scores, the DAST scores, and the 'time spent with a supportive friend or family member' variable. Log10 transformed variables were used in all analyses except descriptive analyses.

Log10 transformations were computed so the appropriate statistical tests could be used without violating the assumption of normality rule. Robust statistical measures (such as winzorized variance and bootstrapping) can also be used when the assumptions needed to use classic parametric tests are violated (Erceg-Hurn & Mirosevich, 2008). However, when using these methods, sample size is significantly reduced and the preservation of a large sample size was necessary in these studies, in order to obtain satisfactory statistical power. This precluded the option of discarding data. For this reason, these data were transformed in other ways (such as the use of log10 transformations).

1. Study 1

An overview of sample characteristics. As shown in Table 11, there are some significant differences between the males and females who completed this survey in terms of socio-demographic variables. Males were older than females; males were more likely to be employed than females; and males earned more income post-separation than females. Furthermore, males had been separated for a longer time than had females.

Table 11
Socio-Demographic Data for Male, Female and Total Sample. Males and Females are Compared for Equality due to Sample Size Difference Using T-Tests with Independent Means or Chi-Square Tests

	Male (*n*=30)	Female (*n*=82)	Total (*N*=112)	t/x^2	*df*	*p*
Age						
Range:	24-58	21-53	21-58			
Mean:	41.9	35.9	37.5	3.6	110	0.000
SD:	9.4	7.1	8.2			
Ethnicity						
NZ European:	76.7%	76.8%	76.8%	No significant differences were found between males and females in the distribution of ethnicity.		
Maori:	10%	13.4%	12.5%			
Australian:	3.3%	1.2%	1.8%			
Other Euro:	6.7%	0.0%	1.8%			
Asian:	0.0%	2.4%	1.8%			
Pacific Island:	0.0%	1.2%	0.9%			
Other:	3.3%	4.9%	4.5%			
Nearest City						
Auckland:	36.7%	32.9%	33.9%	No significant differences were found between males and females in the distribution of location of residence.		
Wellington:	20%	22.0%	21.4%			
Christchurch:	20%	25.6%	24.1%			
Dunedin:	6.7%	3.7%	4.5%			
Tauranga:	6.7%	4.9%	5.4%			
Hamilton:	10.0%	11.0%	10.7%			
Level of Education						
No Formal	6.7%	8.5%	8%	No significant differences were found between males and females on highest level of education achieved.		
High school	20.0%	23.2%	22.3%			
Tertiary/trade/technical qualification	50.0%	31.7%	36.6%			
Bachelors degree	16.7%	31.7%	27.7%			
Masters or higher level degree	6.7%	4.9%	5.4%			
Employment Status						
Full-time	60%	31.7%	39.3%	4.1	1	0.04
Part-time/Casual	23.3%	31.7%	29.5%			
Voluntary	0.0%	2.4%	1.8%			
Homemaker	10%	23.2%	19.6%			
Student	0.0%	6.1%	4.5%			
Retired	0.0%	0.0%	0.0%			
Unemployed	6.7%	4.9%	5.4%			
Working	83.3%	63.4%	68.8%			
Not working	16.7%	36.6%	31.2%			
Weekly Income						
Zero	0.0%	0.0%	0.0%			
1-100	0.0%	0.0%	0.0%			
101-150	0.0%	0.0%	0.0%			
151-200	0.0%	1.2%	0.9%			
201-250	3.3%	1.2%	1.8%			
251-300	0.0%	4.9%	3.6%			
301-400	10.0%	14.6%	13.4%			
401-500	6.7%	20.7%	17.0%			
501-700	30.0%	32.9%	32.1%			
700-1000	23.3%	17.1%	19.6%			
1000+	23.3%	7.3%	11.6%			
Mean	$667.00	$568.00	$631.00	2.5	110	0.013
Time since final separation						
Range (years):	1 week – 2	1 month – 2	1 week – 2			
Mean (months):	12.4	8.9	9.8	2.7	110	.007
SD (months):	6.9	5.8	6.3			

In general, the ethnic distribution in this sample is similar to that of the New Zealand population. The distribution of ethnicities in New Zealand in 2006 were NZ European 67.6%, Maori 14.6%, Australian 0.7%, Other European 2.5%, Asian 8.8%, Pacific Island 6.6% and Other 0.9% (Statistics New Zealand, 2006). The distribution of ethnicities in this sample were NZ European 76.8%, Maori 12.5%, Australian 1.8%, Other European 1.8%, Asian 1.8%, Pacific Island 0.9% and Other 4.5%. It is also worth noting that ethnicity did not affect any of the results of this study and thus will not be discussed further.

Furthermore, 98.9% of the sample had dependent children (children under the age of 18 years). These parents tend to be at higher risk of mental health issues post-separation (Sweeney & Horowitz, 2001; Williams & Dunne-Bryant, 2006). This highlights the necessity of research on such a sample, but also highlights the need for caution in generalizing these results to parents who do not have children under the age of 18.

Table 12 displays the attachment styles of the participants, which is reported here as it differed between sexes. Females were found to have higher levels of anxious attachment and higher levels of avoidant attachment (or lower levels of secure attachment) than males.

Table 12
Difference in Attachment Styles Between Males and Females(N=112). Internal Reliability (IR) also displayed

Variable	Male Mean(SD)	Female Mean(SD)	*t*	*df*	IR Chronbach's Alpha
Anxious Attachment	2.48 (0.58)	2.79 (0.70)	-2.20**	110	0.52
Secure Attachment	0.74 (1.22)	-0.03 (1.43)	-2.62**	110	0.52

Note:
** $p<0.05$

Females initiated the separation themselves more often than their partners did, and males indicated that their partners initiated the separation more often than they did (t = -3.77, df = 110, p <.01; see Figure 1). This is a common finding in literature (see Fletcher, 2002). See Appendix G for non-significant differences in relationship characteristics between males and females.

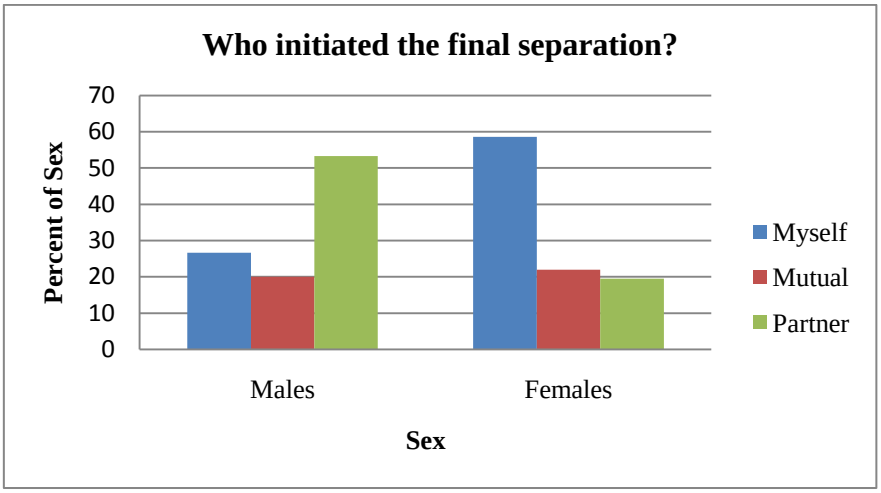

Figure 1: Distribution of initiation of separation across sexes (*N*=112).

Description of the mental health of recently separated parents. This study will now describe the mental health of parents who are recently separated and the predictors of mental health including sex will be investigated.

Prevalence of mental health issues in recently separated parents. Table 13 displays the frequency and severity of each mental health issue in the whole sample, displays results separately for sexes, and displays the internal reliability coefficients for the mental health scales. As predicted, there are considerable mental health issues occurring in the current sample at the moderate to severe levels. Those who indicated that they have a mild or higher level of depression, anxiety and/or stress were categorised as suffering from the mental health issue in further analyses (discussed in the method). Furthermore, the internal reliabilities of all scales used in the analyses were high.

Figure 2 provides the prevalence of mental health issues in this separated parents sample compared with estimates of the New Zealand general adult population (parents and non-parents), and with New Zealand partnered parents and single parents[6]. The results of the current study show that recently separated parents in New Zealand have higher rates of depression, anxiety and suicidal ideation than the general population, partnered parents, or the single parents group.

[6] The information on the prevalence rates for the general, partnered and single parent populations come from various papers developed from Te Rau Hinengaro: The New Zealand Mental Health Survey (Beautrais, et al, 2006; Wells et al., 2006).

Table 13
Level of Severity of Mental Health Issues Across the Whole Sample, Males and Females

Scale	Severity	Total	Male	Female	IR Chronbach's Alpha
DASS-Depression	None Mild Moderate Severe Extreme	49.1% 15.1% 20.6% 6.3% 9.0%	30.0% 33.3% 26.7% 3.3% 6.7%	56.1% 8.5% 18.3% 7.2% 9.7%	0.92
DASS-Anxiety	None Mild Moderate Severe Extreme	63.4% 8.0% 15.3% 6.3% 7.2%	60.0% 10.0% 20.0% 6.6% 3.3%	64.6% 7.3% 13.4% 6.1% 8.4%	0.85
DASS-Stress	None Mild Moderate Severe Extreme	67.9% 12.5% 9.0% 9.0% 1.8%	73.3% 13.3% 13.2% 3.3% 0.0%	65.9% 12.2% 8.5% 10.9% 2.4%	0.89
MAST	None (score:0-2) Early to middle problem drinker (score: 3-5) Problem Drinker (score: >6)	83.9% 13.5% 2.7%	80% 16.6% 3.3%	85.4% 13.2% 2.4%	0.70
DAST	None (score: 0) Low Level (score:1-5) Moderate (score:6-10) Substantial (score:11-15) Severe (score: 16-20)	75.9% 17.9% 4.5% 1.8% 0.0%	53.3% 40.1% 3.3% 3.3% 0.0%	84.1% 9.8% 4.8% 1.2% 0.0%	0.90
Suicidal Ideation	None Low Moderate Severe	79.5% 14.3% 2.7% 3.6%	63.3% 23.3% 3.3% 10.0%	85.4% 11.0% 2.4% 1.2%	0.70

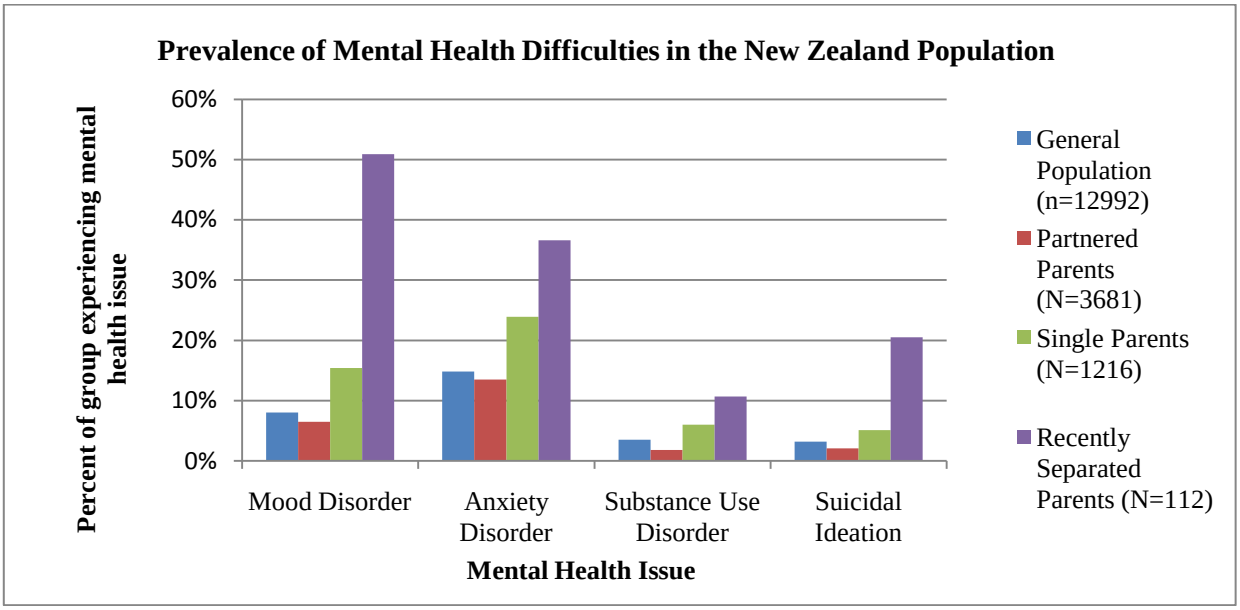

Figure 2: Prevalence of Mental Health issues in the New Zealand Population (blue, red and green data; Beautrais, et al, 2006; Wells et al., 2006) and in recently separated parents from this study (purple data).

Of this sample of recently separated parents, 50.9% reported symptoms of depression, 36.6% reported symptoms of anxiety, 10.7% reported symptoms of a substance use disorder, and 20.5% reported suicidal ideation. In comparison, of the partnered parents and single parents in Te Rau Hinengaro, 6.5% and 15.4% reported symptoms for depression, respectively; 13.5% of partnered parents and 23.9% of single parents reported symptoms for anxiety; 1.8% of partnered parents and 6% of single parents reported symptoms for a substance use disorder; and 2.1% of partnered parents and 5.1% of single parents reported suicidal ideation. However, substance use is not as high as has been previously found in other samples.

Te Rau Hinengaro showed that, of the general adult population in New Zealand, 3.2% had thought about suicide, 1% had planned suicide and 0.4% had attempted suicide. In stark contrast, in this sample of recently separated parents, 20.5% had thought about suicide since the separation, 6.3% had planned suicide, and 3.6% had attempted suicide.

Table 14 displays the means and standard deviations of all the mental health scales for the total sample in the current study. The depression score of 10.80 indicates mild depression in the sample, in line with predictions. The anxiety score of 6.50 falls just below the cut off for being mildly anxious (cut-off score is seven). The mean scores for stress, alcohol, drug use and suicidal ideation also all fall below the mild level of the mental health issues indicating that the average score in this sample is not higher than that of the general population, which is contrary to expectations. Although the average scores in this sample are in the non-clinical range (apart from mild depression), the results show that mental health issues are occurring more often, and to a higher degree, in recently separated parents than in other populations in New Zealand. In other words, recently separated parents are at a higher risk for mental health issues than other populations in New Zealand.

Table 14
Means and Standard Deviations (SD) of Mental Health Scales Across the Whole Sample

Scale	Mean (SD)
DASS-Depression (Score range 0-38)	10.79 (9.70)
DASS-Anxiety (Score range 0-36)	6.45 (7.35)
DASS-Stress (Score range 0-38)	12.80 (8.50)
Alcohol Use (Score range 0-11)	1.34 (1.84)
Drug Use (Score range 0-13)	0.91 (2.37)
Suicidal Ideation (Score 0-3)	0.30(0.70)

Predictors of mental health issues[7].

Table 15 displays the correlations between the mental health dependent variables and the predictor variables.

Table 15
Zero-Order Correlations among Predictors and Mental Health Variables

Variable	Subjective Wellbeing	Mental Health	Suicidal Ideation	Substance Use
Time since separation	-.24*			
Life interference of Mental Health	-.43**	a		
How much did you want final separation	.22*	-.21*		
Current financial situation	.21*	-.27**		
Level of education		-.21*		
Anxious attachment		.33**		
Secure Attachment		-.36**		
Level of forgiveness	.31**	-.33**		
Positive life change short-term (Higher score means they think it is a positive change short term)	.27*	-.34**	-.19*	
Positive life change long term (Higher score means they think it is a positive change long term)			-.23*	
Mental Health History	-.24*	.41**		.26*
History of substance abuse				.62**

Note: a= This variable was included in the development of this composite '*mental health'* variable, therefore the correlation is not applicable with this variable.
*$p \leq 0.05$, ** $p \leq 0.01$

Participants had a higher level of subjective wellbeing if they; had been separated for a shorter amount of time; had less areas of their lives affected by the mental health issues; had wanted the

[7] There were a number of variables discussed in the introduction which I considered were likely to have effects on mental health and/or parenting practices; namely, family history of mental health issues and suicidality, family history of parental separation, ethnicity, and attendance to parenting course post-separation). However, these variables were not significantly associated to the dependent variables in this study and thus will not be discussed further.

separation; rated their current financial situation better; were more forgiving towards their ex-partner; thought the separation was a positive change in the short term; and did not have a history of mental health issues. As predicted, poor mental health post-separation was associated with; not wanting the separation; lower current financial situation; a lower level of education; a more anxious attachment style; a less secure attachment style; less forgiveness of the ex-partner; thinking the separation was not a positive change in the short term; and a history of mental health issues. Suicidal ideation was associated with thinking that the separation was not a positive change for either the short term or for the long term. Additional to Table 15, suicidal ideation increased as mental health issues were interfering more with work (r = 0.26, p = 0.01); and if someone did not know where to get help (r = 0.20, p = 0.05). Finally, as predicted, a higher level of substance use post-separation was associated with if they had a history of mental health issues or substance abuse. Unexpectedly, no other independent variables related to substance use post-separation.

Table 16
Predictors that Determine Poor Mental Health and Substance Use at Time 1 from Simultaneous Multiple Regressions

Predictor	**ß**	***t***	***P***
Subjective Wellbeing			
Time since separation	-0.28	-3.29	0.00
Positive relationship with ex-partner post-separation	0.36	4.33	0.00
Positive thoughts on separation	0.26	3.07	0.00
Mental Health History	-0.18	-2.10	0.04
Poor Mental Health			
Level of education	-0.19	-2.34	0.02
Positive thoughts on separation	-0.32	-3.99	0.00
Positive relationship with ex-partner post-separation	-0.26	-3.15	0.00
Mental Health History	0.34	4.22	0.00
Suicidal Ideation			
Sex	-0.24	-2.54	0.01
Positive thoughts on separation	-0.19	-2.10	0.04
Substance Use			
History of mental health issues	0.28	2.96	0.00

Table 16 provides the results of multiple regression analyses. After controlling for sex, time since separation and level of education, several independent variables were found to predict the dependent variables at Time 1. Predictors of higher subjective wellbeing post-separation were: a

shorter time since separation; a positive (low-conflict, high forgiving) relationship with the ex-partner; positive thoughts on the separation; and not having a history of mental health issues (R^2 = .30, F(6, 105) = 7.52, p <.01). As expected, predictors of poor mental health post-separation were: a lower level of education; less positive thoughts on the separation; a negative (high-conflict, low forgiving) relationship with their partner post-separation; and having a history of mental health issues (R^2 = .35, F(6, 105) = 9.48, p <.01). Being male and having less positive thoughts on the separation predicted more suicidal ideation post-separation (R^2 = .11, F(4, 107) = 3.37, p = .01). The only good indicator of heavy substance use post-separation was a history of having mental health issues before the separation (R^2 = .09, F(4, 107) = 2.74, p = .03).

Sex differences in mental health. Table 17 reports the t-test (for independent means) results for the sex differences between the mean scores across mental health measures. There were no differences in mean level of subjective wellbeing, mental health, or substance use between sexes. However, suicidal ideation was clearly higher in males' post-separation than it was for females.

Table 17
T-Test Results Displaying Sex Differences in Mental Health Scores

	Male Mean(SD)	**Female Mean(SD)**	***t***	***Df***
Subjective Wellbeing	1.73(1.53)	1.76(1.54)	ns	Ns
Mental Health	-.28 (2.84)	0.10(3.49)	ns	Ns
Suicidal Ideation	0.60(0.97)	0.20(0.53)	2.17*	35.59
Substance Use	0.37(1.97)	-0.13(1.45)	ns	Ns

Note:
* p= 0.04

In order to control for the difference in 'time since separation' between males and females, a multiple regression analysis was conducted with 'suicidal ideation' as the independent variable, and 'sex' and 'time since separation' as the dependent variables (R^2 = .07, F(2, 109) = 4.10, p = .02). 'Time since separation' was not a significant predictor of suicidal ideation, while 'sex' explained a significant amount of variance in the suicidal ideation scores ($ß$ = -.27, t = -2.86, p = 0.01; $ß$ = -0.06, t = -0.58, p = .56). Therefore, sex differences exist despite that difference in time since separation between the sexes.

A couple of other significant differences between males and females were found in their reasons for not seeking support, if they felt they needed it. There were no sex differences in the majority of the reasons for not seeking support (see Appendix G), however, males were less likely than females to seek help because they did not think anything would help them, $x^2(1, N = 112) = 5.13$, $p = 0.02$, and because they did not want to appear as having mental health issues, $x^2(1, N = 112) = 4.40$, $p = 0.04$.

The parenting practices of recently separated parents. Table 18 provides a description of the parenting practices of the whole sample, as well as the internal reliability coefficients for each measure. Unexpectedly, the sample, as a whole, provided high levels of positive parenting and low levels of negative parenting equivalent to the average parenting scores developed by the authors of the APS (positive parenting ranged from 3.64 - 4.77 and negative parenting scores ranged from 1.62-2.81; King et al., 2007). However, the parents in this sample had a parenting self-efficacy score just below the average score range presented by the authors of the scale (average scores ranged from 3.54 - 3.65; Johnston & Mash, 1989). All scales had high internal reliabilities.

Table 18
Mean Scores on Parenting Scales Across the Whole Sample and Internal Reliability (IR) Scores

	Mean (SD)	**IR Chronbach's Alpha**
Authoritative Parenting (Positive)	4.52(0.41)	0.76
Authoritative Parenting (Negative)	1.96(0.81)	0.81
Parenting Self-Efficacy	3.30(0.77)	0.86

Table 19 provides descriptive information about the time spent parenting and the parent-child relationship in this sample post-separation. Almost one third of the sample saw their children less, over one third saw their children about the same amount of time, and one third of the parents saw their child more post-separation than pre-separation. The majority of parents (58%) thought that the relationship with their children had improved since the separation, while only 12% thought it had deteriorated.

As predicted, the main type of parenting plan post-separation was sole care by one parent (73.2% of plans), and only 25% of plans involved shared care. Thirty percent of the sample was currently going through the New Zealand Family Court to resolve the parenting plan for their children. Parents who developed post-separation child care arrangements between themselves developed a shared care plan 31.6% of the time, and 68.4% of the time they developed a sole care arrangement, whereas, for parents who went to the New Zealand Family Court in order to resolve child care arrangements 12.1% of them had a shared care plan, 84.8% had a sole care arrangement (includes sole care to the mother or father) and 3.1% had another type of arrangement. All parents had at least one area of conflict with their ex-partner. Forty six percent had one issue while 25% of the sample was in conflict with their ex-partner over four or more issues.

Table 19
Descriptive Information on Parenting Variables Across the Whole Sample (N=112) Including Areas of Conflict with Ex-Partner Displayed Separately for Males and Females

Variable	**Category**	**Frequency**	**Mean (Standard Deviation)**	**Score Range**
Do you spend more or less time with your children now?	1=Less 2=About the same 3=More	27.7% 38.4% 33.9%	2.06(0.79)	1.00 to 3.00
Is your relationship with your children better or worse now?	1=Worse 2=About the same 3=Better	11.6% 30.4% 58.0%	2.46(0.70)	1.00 to 3.00
Have you or are you currently going through the Family Court to resolve a day-to-day care dispute?	0=No 1=Yes	75.0% 25.0%	0.29(0.46)	0.00 to 1.00
What are the day-to-day care plans for your children?	0= Do not see their children 1= The ex partner has full time care 2= Shared care 3= Have sole day-to-day care _____ Other arrangement e.g. one child each.	0.9% 9.8% 22.3% 63.4% 3.6%	2.52(0.71)	0.00 to 3.00
Number of issues of conflict with ex-partner:	1 2 3 4+	46.4% 11.6% 17.9% 24.1%	2.42(1.65)	1.00 to 6.00
Area of conflict	**Males**	**Females**		
Transitions between parents	50.0%	52.4%		
Finances	70.0%	67.1%		
The parenting plan	30.0%	37.8%		
Rules and routines in the two homes	53.3%	42.7%		
Schooling	26.7%	14.6%		
Health decisions and information	33.3%	19.5%		

For both males and females, ‘finances’ were the largest cause of conflict, with about 70% of separated parents in conflict over this. ‘Transitions from one parent to the other’, and ‘the rules and routines in the two homes’, were the next two highest forms of conflict for males and females, with about half of males and females reporting conflict with their ex-partner on these topics. About one third of males and females had conflict over ‘the parenting plan’. Males reported more conflict over ‘schooling’ and ‘health decisions’ than the females, with 33.3% of males reporting conflict with their ex-partner over ‘health decisions’ for their children. A small proportion of parents reported having conflict over ‘schooling’ but was still an area of conflict for 25% of the males and 15% of the females.

Predictors of parenting variables. Predictors of parenting variables were investigated in this section. Results of zero-order correlations showed that parents who had more conflict with their ex-partner tended to rate their financial situation lower (r = -0.23, p = 0.05); and were more likely to be going through the New Zealand Family Court for a day-to-day care dispute (r = 0.49, p = 0.00).

Multiple regression analyses were also run in order to investigate which variables predicted positive parenting or negative parenting post-separation. No predictors reached significance.

Sex differences in parenting variables. Table 20 displays the sex differences in parenting variables. In line with previous research, females had more sole care of their children post-separation, spent more time with their children post-separation, and had a better relationship with their children post-separation, compared with males. However, there were no significant differences found in the parenting of males and females post-separation.

Table 20
T-Test and Chi-Square Results Displaying Sex Differences in Parenting Variables

Variables	**Male Mean(SD)**	**Female Mean(SD)**	***t/X²***	***Df***
Day-to-day care plans (level of contact with children)	2.03(1.00)	2.79(0.52)	-3.97**	34.79
More or less time with child now	1.67(0.76)	2.21(0.75)	-3.37**	110
Relationship with child better or worse now	2.13(0.82)	2.59(0.61)	-2.76**	41.25

Note:
** $p \leq 0.05$.

The cross-sectional relationship between mental health and parenting variables. This section describes the relationships between mental health and parenting variables. Table 21 suggests that as the parental self-efficacy score decreased, mental health got poorer. As predicted, the higher the amount of conflict with the ex-partner post-separation, the higher the mental health issues post-separation. Furthermore, as expected, as it gets harder to develop a day-to-day care plan post-separation, there was an increase mental health issues and as parents had less day-to-day care for their children, suicidal ideation increased.

Table 21
Zero-Order Correlations among Parenting Practices and Mental Health Scores

Variable	Subjective Wellbeing	Mental Health	Suicidal Ideation	Substance Use
Parenting Self-efficacy		-.22*		
Level of conflict	-.29*	.31**		
Ease of reaching day-to-day care plan	.35**	-.25**		
What are the day-today care plans for your children? (Higher score means more time caring for children).			-.19*	

Note:
* $p \leq 0.05$, ** $p \leq 0.01$

Table 22 displays the t-test (for independent means) results between those who were going through the New Zealand Family Court in order to resolve day-to-day care disputes and those who developed the day-to-day care plans for their children themselves. As predicted, those who went through the Family Court in order to resolve day-to-day care disputes with their ex-partner had lower subjective wellbeing than those who did not. Furthermore, any mental health issues that they suffered from seemed to be more severe in that they interfered with more aspects of their lives than those separated parents who developed the day-to-day care plans for their children themselves.

Table 22
T-Test Results on Involvement with New Zealand Family Court and Mental Health Status

Variable	Going through Family Court Mean(SD)	*t*	*df*	*P*
Subjective Wellbeing	No: 1.96(1.53) Yes: 1.24(1.44)	2.31	110	0.02
Life interference of mental health	No:3.27(2.72) Yes:4.48(2.77)	-2.15	110	0.03

A multiple regression analysis was run in order to determine whether parenting variables predicted mental health issues or if mental health issues predicted level of parenting post-separation. No predictors reached significance.

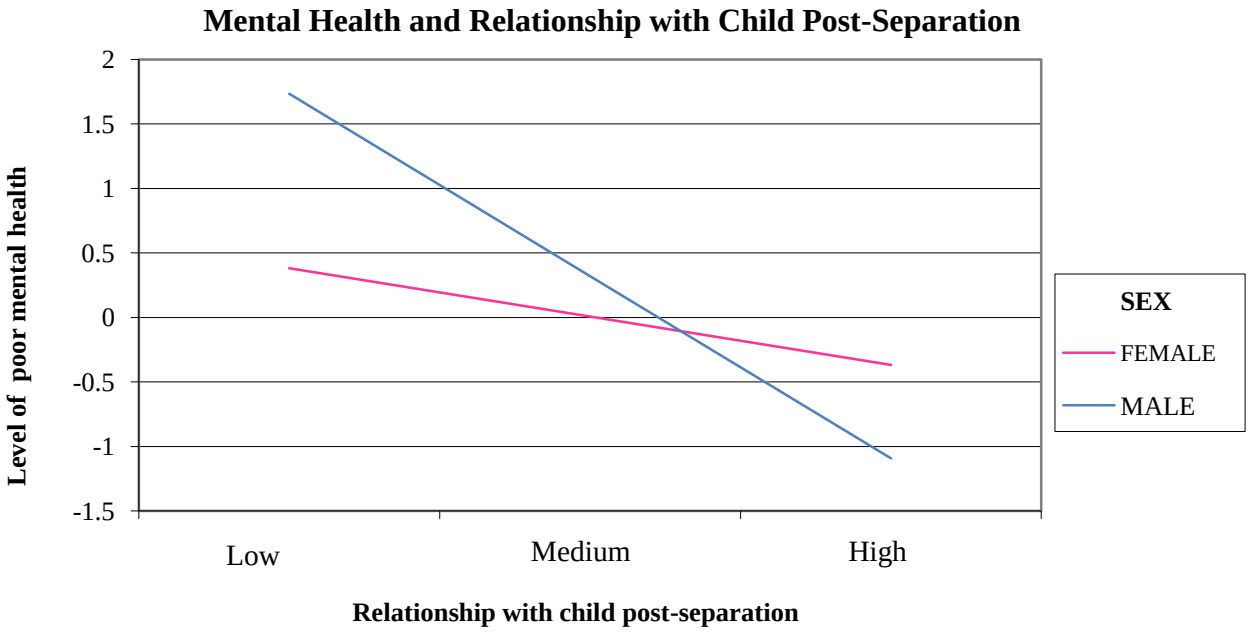

Figure 3: Moderation analysis of sex moderating the relationship between relationship with child post-separation and level of mental health issues. Correlation between relationship with child and mental health issues, $r = .02$, $p = 0.88$.

A moderation analysis showed that for both males and females, as the relationship with the child deteriorated post-separation, there were higher levels of mental health issues experienced. However, this relationship was more pronounced for males than for females (see Figure 3).

Summary of results from Study 1. In summary, Study 1 described the mental health and parenting practices in a representative sample of recently separated New Zealand parents. Sex differences that were found between males and females included that males were older, had higher employment levels; earned more income post-separation; and had been separated for a longer time than females. Females initiated the separation more commonly and displayed higher levels of anxious attachment style post-separation than males.

Recently separated parents were at higher risk of mental health issues than the other comparison groups, particularly suicidal ideation, and reported higher levels of depression than

those in the general population. Males had significantly higher levels of suicidal ideation post-separation than females did. Many predictor variables were associated with mental health post-separation but the most powerful predictors of low subjective wellbeing, poor mental health, suicidal ideation or substance use were the degree to which people; thought negatively about the separation; had a negative relationship with their ex-partner; and had a history of mental health issues. Time since separation also predicted subjective wellbeing in that longer times since separation, were associated with lower subjective wellbeing.

Recently separated parents displayed levels of positive and negative parenting similar to the average scores reported by the authors of the scale however, they scored just below the average score range for parenting self-efficacy. Sole care was the main type of parenting plan developed. There was at least one source of conflict felt by all parents in this sample, typically over finances, transitions or rules and routines in the home. Females were more likely than males to have sole care of the children; see the children more post-separation than before the separation; and have a better relationship with their child post-separation than before the separation. There were no differences in levels of positive or negative parenting or in parenting self-efficacy between males and females.

There were several relationships between mental health and parenting variables found. More conflict between parents, and difficulty of developing a day-to-day care plan were both related to lower subjective wellbeing and poorer mental health. Furthermore, involvement in the family court was associated with lower subjective wellbeing and less day-to-day care of children post-separation increased levels of suicidal ideation. Finally, a moderation affect was found in which better relationships with child/ren post-separation was associated with better mental health, but this relationship was more pronounced for males than it was for females.

2. Study 2

In this section, first an overview of sample characteristics is provided. Second, the changes in mental health status over time were assessed, and sex differences discussed. Third, changes in parenting variables over time were assessed and sex differences were explored. Finally, the relationship between mental health and parenting variables was investigated longitudinally over five months and sex differences in the relationships explored.

An overview of some sample characteristics. The sub-sample of participants who completed this second study was still similar to the whole sample that completed Study 1 (see Table 23). The same significant differences existed between the males and females who completed this survey in terms of socio-demographic variables, as those who completed the sample from Study 1. Males were older than females; males had higher levels of employment than females; and males earned more income post-separation than females. The ethnic distribution was similar and so was the distribution of participants from around New Zealand.

Those who had experienced the Canterbury earthquake on September 4th 2010 reported higher anxiety levels at Time 2 than those who had not experienced the earthquake, $x^2(13, N = 88) = 22.6$, $p < 0.05$. There were no other significant differences. A repeated measures t-test analysis showed that there was a significant interaction effect of having experienced the earthquake on level of anxiety at Time 2, $F(1, 62) = 7.56$, $p = 0.01$.

Table 23
Socio-Demographic Data for Male, Female and Whole Sample

	Male (*n*=22)	Female (*n*=66)	Total (*N*=88)	t/x^2	*df*	*p*
Age						
Range:	27-58	21-53	21-58	4.3	86	0.00
Mean:	44.2	36.3	38.2			
SD:	8.3	7.3	8.2			
Ethnicity						
NZ European:	77.3%	81.8%	80.7%	There were no significant differences found between males and females in the distribution of ethnicity.		
Maori:	9.1%	9.1%	9.1%			
Australian:	4.5%	1.5%	2.3%			
Other Euro:	9.1%	0.0%	2.3%			
Asian:	0.0%	1.5%	1.1%			
Pacific Island:	0.0%	0.0%	0.0%			
Other:	0.0%	6.1%	4.5%			
Nearest City						
Auckland:	27.3%	28.8%	28.4%	There were no significant differences found between males and females in the distribution of location of residence.		
Wellington:	13.6%	24.2%	21.6%			
Christchurch:	31.8%	30.3%	30.7%			
Dunedin:	9.1%	3.0%	4.5%			
Tauranga:	9.1%	6.1%	6.8%			
Hamilton:	9.1%	7.6%	8.0%			
Level of Education						
No Formal	9.1%	7.6%	8%	There were no differences found between males and females on highest level of education achieved.		
High school	18.2%	19.7%	19.3%			
Tertiary/trade/technical qualification	45.5%	33.3%	36.4%			
Bachelors degree	18.2%	33.3%	29.5%			
Masters or higher level degree	9.1%	6.1%	6.8%			
Employment Status						
Full-time	72.7%	28.8%	39.8%	2.2	86	0.03
Part-time/Casual	13.6%	39.4%	33.0%			
Voluntary	0.0%	1.5%	1.1%			
Homemaker	9.1%	19.7%	17.0%			
Student	0.0%	6.1%	4.5%			
Retired	0.0%	0.0%	0.0%			
Unemployed	4.5%	4.5%	4.5%			
Working	87.5%	70.3%	72.7%			
Not working	12.5%	29.7%	27.3%			
Weekly Income						
Zero	0.0%	0.0%	0.0%			
1-100	0.0%	1.5%	1.1%			
101-150	0.0%	0.0%	0.0%			
151-200	0.0%	1.5%	1.1%			
201-250	0.0%	3.0%	2.3%			
251-300	0.0%	3.0%	2.3%			
301-400	0.0%	9.1%	6.8%			
401-500	18.2%	19.7%	19.3%			
501-700	18.2%	39.4%	34.1%			
700-1000	27.3%	18.2%	20.5%			
1000+	36.4%	4.5%	12.5%			
Mean	$747.00	$600.50	$666.17	3.6	86	0.001

Table 24 displays the means, standard deviations and participants' score range for the dependent and independent variables at Time 2.

Table 24
Means, Standard Deviations(SD) and Score Ranges of Dependent and Independent Variables at Time 2

Dependent Variable	**Mean(SD) Time 2**	**Range of Participants Scores**
Subjective Wellbeing	2.64(1.35)	0.00 to 4.00
Mental Health	0.00 (3.31)[a]	-7.85 to 4.67
Suicidal Ideation	0.20 (0.41)	0.00 to 1.00
Substance Use	0.00 (1.56)[a]	-0.73 to 7.57
Positive Parenting	0.00 (1.71)[a]	-4.61 to 2.97
Negative Parenting	1.89(0.70)	1.00 to 4.40
Independent Variable	**Mean (SD) Time 2**	**Range of Participants Scores**
Level of Education	Not measured again	-
Time since separation	Not measured again	-
Thoughts on separation	0.00 (1.78)[a]	-4.54 to 3.77
Relationship with ex-partner	0.00 (1.60)[a]	-4.20 to 2.69
Level of support	0.00 (2.90)[a]	-5.86 to 7.69
Mental Health history	Not measured again	-
Anxious Attachment	3.35 (0.56)	1.40 to 5.00
Secure attachment	-0.30 (0.98)	-2.40 to 4.00
Relationship with child	0.00 (1.63)[a]	-5.57 to 3.15

Note:
[a]: Means and standard deviations of summed z-score transformations.

Additionally, in the second survey, after analyses of the first mental health results indicated a need to understand what may be affecting the parents mental health post-separation, participants were asked to indicate which aspect of post-separation life was the hardest to deal with (see item B10, in Appendix D).

Table 25a
Description of the Hardest Areas to Deal with Post-Separation for Males

Area of Difficulty	**Percent of males who found each area of difficulty the hardest to deal with.**
The loss of quality in the life/lifestyle I had before the separation	45.5%
The loss of quality in the relationship with my child/ren	18.2%
The loss of quality in the relationship with my ex-partner	18.2%
None of these things affected me	9.1%
I experienced no loss in quality in any of these aspects post-separation	9.1%

Table 25b ***Description of the Hardest Areas to Deal with Post-Separation for Females***	
Area of Difficulty	**Percent of females who found each area of difficulty the hardest to deal with.**
The loss of quality in the life/lifestyle I had before the separation	42.4%
I experienced no loss in quality in any of these aspects post-separation	25.8%
None of these things affected me	15.2%
The loss of quality in the relationship with my ex-partner	9.1%
The loss of quality in the relationship with my child/ren	7.6%

As shown in Tables 25a and 25b, both males and females find that the loss of quality of life is the hardest thing to deal with post-separation. The loss of quality of relationship with children and ex-partner was much harder for males to deal with post-separation than it was for females. Females tended to state that they were not affected by any aspects, or they did not experience difficulty in any aspects of separation more often than their male counterparts.

Changes in mental health status over time. This section assessed the changes in mental health over five months; and investigated sex differences. Paired sample t-tests found that parents did not have significantly different levels of mental health or substance use at Time 2 compared with Time 1, contrary to predictions (see Table 26). However, subjective wellbeing ratings increased for males and females from Time1 to Time 2.

Table 26 ***T-Test Results Displaying Differences in Mental Health Scores Between Sexes***					
Mental Health Issue	**Sex**	**Time 1**	**Time 2**	***t***	***df***
Subjective Wellbeing	Male	1.59(1.47)	2.5(1.37)	-2.37*	21
	Female	1.80(1.51)	2.68(1.35)	-3.89**	65
Mental Health	Male	0.43(2.82)	0.96(2.63)	ns	
	Female	-0.07(3.15)	-0.32(3.46)	ns	
Suicidal Ideation	Male	0.77(1.07)	0.27(0.46)	2.13*	21
	Female	0.23(0.58)	0.18(0.39)	ns	
Substance Use	Male	0.07(1.48)	0.06(1.27)	ns	
	Female	-0.28(1.25)	-0.02(1.68)	ns	
Note: * p= 0.05, ** p= 0.00.					

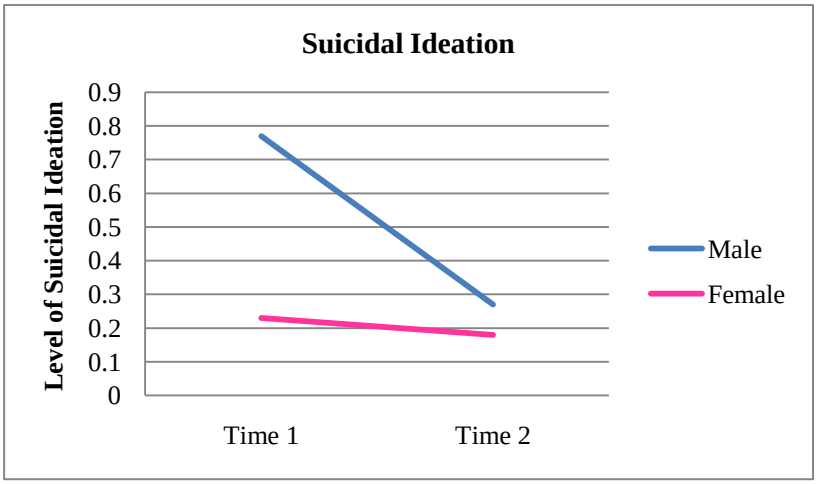

Figure 4: Significant interaction of sex on level of suicide from Time 1 to Time 2.

Furthermore, there was a significant decrease in the level of suicidal ideation that males showed at Time 2 as opposed to Time 1 (see Table 26). Repeated measures analyses showed that there was a significant interaction of sex in the change in suicidal ideation from Time 1 to Time 2, $F(1, 88) = 5.39$, $p = 0.02$. As seen in Figure 4, there was clearly a significant reduction of suicidal ideation in males from Time 1 to Time 2, as opposed to females who had less of a decline.

After controlling for sex, time since separation and level of education, several independent variables were found to predict the dependent variables at Time 2, using multiple regression. Poor mental health at Time 1 was a significant predictor of lower subjective wellbeing at Time 2 (see Table 26; $R^2 = .13$, $F(4,83) = 2.96$, $p = 0.02$)[8]. Predictors of poor mental health at Time 2 were having a lower level of secure attachment at Time 1; and having poor mental health at Time 1 ($R^2 = .36$, $F(5,82) = 9.05$, $p < .01$).

Table 27
Predictors of Poor Mental Health and Substance Use at Time 2

	ß	*t*	*p*
Subjective Wellbeing			
Mental health Time 1	-0.28	-2.69	0.01
Poor Mental Health			
Secure attachment	-0.21	-2.04	0.04
Mental health Time 1	0.43	4.62	0.00
Suicidal Ideation			
Relationship with child	-.38	-3.40	0.00
Substance use Time 1	0.33	3.45	0.00
Substance Use			
Substance use Time 1	0.67	8.97	0.00

[8] In each regression the 'time dependent variable' was also included as an independent variable. Therefore, the results indicate the predictor variable is predicting change over time.

Predictors of higher suicidal ideation at Time 2 were; more substance use at Time 1; and a worse relationship with their child at Time 1 (R^2 = .28, F(5, 82) = 6.37, p <.01). Heavier substance use at Time 1 was a significant predictor of heavier substance use at Time 2 (R^2 = .52, F(4,83) = 22.05, p <.01).

Changes in parenting variables over time. Longitudinal changes in parenting practices over a five month period and any sex differences were assessed in this section. As seen in Table 28, the only significant change observed was that parents' level of self-efficacy increased from Time 1 to Time 2. This was unexpected. The only sex difference to be found was that over time males relationship with their child increased, but for females their relationship with their child decreased.

Table 28:
T-tests Displaying Differences Scores on Parenting Measures

		Time 1	Time 2	*t*	*df*
Positive Parenting		4.54(0.40)	4.50(0.40)	ns	
Negative Parenting		1.94(0.75)	1.84(0.70)	ns	
Parental Self-Efficacy		3.40(0.69)	3.62(0.73)	-4.01**	87
Relationship with child	Male	-2.06(2.73)	0.29(1.99)	-3.82*	21
	Female	0.68(1.75)	-0.10(1.50)	3.20*	65

Note:
* p<0.05, ** p= 0.00

The longitudinal relationship between mental health and parenting variables. Study 1 found that a longer time since separation predicted lower subjective wellbeing. In contrast, Study 2 found that a longer time since separation was related to a decrease in suicidal ideation as well as an increase in subjective wellbeing. At Time 1, the average parenting self-efficacy score was just lower than average scores but at Time 2 the average parenting self-efficacy score had increased into the average score range. In other words, it seems that when mental health was poor so was parenting self-efficacy, but when mental health improved so did parenting self-efficacy.

A multiple regression analysis was run to test if the mental health and parenting variables were related. No significant mental health predictors were found for parenting practices at Time 2. However, as shown in Table 27, a worse relationship with child at Time 1 predicted more suicidal ideation at Time 2. Furthermore, results in Table 28 show that over time the relationship with the child for males increases while it decreases for females. As the relationship with child has been shown to associate with suicidal ideation, an increase in the relationship with their child post-separation for males may be associated with the decrease in males' suicidal ideation over time. This is also supported by the result that males more often found losing the relationship with their child post-separation the hardest aspect of the separation to deal with. Future research should investigate this.

Summary of results from Study 2. In summary, the sample of recently separated parents in Study 2 was similar to the sample in Study 1. The same descriptive sex differences occurred and the sample looked to be as representative as the first sample.

The loss of quality of the relationship with their child/ren was harder for males to deal with post-separation than it was for females, but they were both affected by the loss of quality or change in lifestyle caused by the separation.

The participants' subjective wellbeing increased over time for both males and females, and suicidal ideation decreased from Time 1 to Time 2. Furthermore, suicidal ideation was moderated by sex, in that it decreased significantly more over time for males than it did for females. Some predictors of poorer mental health adjustment at Time 2 were poor mental health at Time 1, substance use at Time 1, a lower secure attachment style at Time 1 and a poorer relationship with their child at Time 1.

The only changes in parenting variables across time was that parenting self-efficacy increased from Time 1 to Time 2 and that there was a change in relationship with child over time. Males' relationship with their child increased over time while females' relationship with their child

decreased over time. No other sex differences were found. A change in mental health trajectory over time, and a change in parenting self-efficacy and relationship with child over time were found. No Time 1 predictors of mental health were related to changes in parenting variables at Time 2 but a worse relationship with child at time 1 predicted more suicidal ideation at Time 2.

Discussion

These studies addressed the mental health and parenting practices of parents who had recently separated. To address this issue, eight aims were investigated across two studies; Study 1 (which used a cross sectional research design) and Study 2 (which used a longitudinal research design across five months). The first study consisted of four aims. The first aim was to provide an overview of the sample characteristics. Secondly, the first study described the mental health of the sample. Within this aim, Study 1 examined the prevalence of mental health issues in this sample, predictors related to separation and mental health, and investigated sex differences. The third aim in Study 1 was to describe the parenting practices of this sample. Within this aim, Study 1 measured the parenting practices of the sample, investigated predictors related to parenting variables, and investigated sex differences. Finally, this study investigated the cross-sectional relationship between mental health and parenting variables.

There were four aims in Study 2. The first aim was to provide an overview of the sample characteristics. Secondly, this study aimed to assess changes in mental health status over a five month period. The third aim was to assess changes in parenting variables over a five month period and the final aim was to investigate the relationship between mental health and parenting variables in parents who have recently separated.

The discussion will be sectioned according to each research focus, firstly describing the sample characteristics of each sample, then discussing the mental health results of recently

separated parents (from both Study 1 and Study 2), followed by parenting practice results (from both Study 1 and Study 2), which are then followed by the findings (from both Study 1 and Study 2) on the relationship between mental health and parenting variables.

1. Demographic Information

The first objective of this study was to provide an overview of the sample characteristics. The sample was representative of the New Zealand population, as participants were from a range of cities throughout New Zealand, comprised a wide range of ethnicities, had a wide age range, and a representative level of education, employment status and level of income. The sample that was recruited showed some differences between males and females in terms of socio-demographic variables. Significant differences arose between males and females on age, employment status, level of income and time since separation. The majority of differences are commonly found. For example, males tend to be older than females in relationships, and older when they marry (Casterline, Williams & McDonald, 1986; Khawaja, 2001). Males also have higher levels of employment post-separation and earn more income post-separation than females (Hill & Hilton, 1999; Smyth, Qu & Weston, 2004; Williams-Dunne-Bryant, 2006).

Females were also found to initiate the separation more often than males did. This is again, a common finding (Fletcher, 2002; Hewitt, Western, & Baxter, 2006; Rokach, Cohen & Dreman, 2004). However, one unexpected finding was that males who completed the survey had separated from their partners for a longer time than the females had separated from their partner. This may occur because females initiate the dissolution of relationships more often than males do (Hewitt et al, 2006; Rokach et al, 2004), which may indicate that they have emotionally and mentally finalised the break-up of the relationship earlier on in the process than males. Thus, it is possible that females who have been separated for a shorter amount of time would complete such a survey whereas it may take males a longer time to come to terms with the final separation before completing a survey

such as this one. However, this speculation requires empirical testing as this may also have occurred at random. Furthermore, it may be that females are more willing to discuss distressing topics than males are (Horwitz, 1977). This would mean at the earlier more distressing stages of separation, more females would complete this type of survey than males would.

Females were also found to be more avoidant and anxiously attached than males were. It is well known that post-separation, people tend to have higher levels of anxious or avoidant attachment styles than during a relationship (Kirkpatrick & Hazan, 1994). The reason that females may be more anxious or avoidant than males is that post-separation, they have lower income and generally have sole care of the child/ren (as confirmed by the current results and previous research; e.g. Strohschein et al., 2005; Varner & Mandara, 2009; Williams & Dunne-Bryant, 2006). This would create more stressful circumstances for females post-separation, thus causing more avoidant and anxious attachment styles.

Although differences between males and females were found, they are not of concern because the demographic, descriptive and general results are consistent with previous research and this adds weight to the reliability of the current data. Overall, in terms of these variables the current sample matches other samples of separated adults studied.

The sample which completed Study 2 was similar to the sample which completed Study 1. Therefore, the sample in this study would have a similar level of representativeness and reliability, as the sample did in Study 1. Those who completed both studies and had experienced the Canterbury Earthquake in the period between the two surveys were more anxious at Time 2 than those who had not experienced the earthquake. This was controlled for where necessary. There were no other differences found between samples, or between those who experienced the earthquake and those who did not.

Study 2 also assessed which aspects of separation the males and females found the most difficult to deal with. Both males and females found that the loss of quality of life is the hardest

thing to deal with post-separation. The loss of quality of relationship with the child/ren and ex-partner was much harder for males to deal with post-separation than it was for females. Females tended to state that they were not affected by any aspects, or they did not experience difficulty in any aspects of separation more often than their male counterparts. This additional descriptive information provided insight into the different circumstances males and females experience post-separation. The relevance of these results are discussed with in line with other findings further on.

2. Mental Health of Recently Separated Parents

The second objective of this study was to describe the mental health of parents who had recently separated. Within this aim, the prevalence of mental health issues in this sample; predictors relating to mental health; and sex differences were investigated.

Prevalence of mental health issues. Firstly, as expected, a high proportion of the sample had scores which indicated mild to extreme forms of depression, anxiety, and stress. Furthermore, the average mental health score for a recently separated parent was no higher for anxiety or stress than the average score from a person found in the general population. However, the average depression score from the recently separated parent group was higher than the average score from the general population. This suggests that recently separated parents are more depressed than those who have not experienced a recent separation. Additionally, in comparison with the general population, or partnered parents or single parents, this sample of separated parents were scoring higher on all mental health issues measured (depression, anxiety, stress, substance use, and suicidal ideation)[9].

The finding that separated parents in New Zealand have higher rates of depression, anxiety and stress than the general population, partnered parents or the single parents group, may indicate

[9] Although there are a higher proportion of people experiencing mental health issues, it is still a minority of people who are experiencing anxiety, stress, substance use, and suicidal ideation post-separation. Half of all participants reported mild to severe depressive symptoms.

that as well as being at higher risk for mental health issues than partnered parents and the general population, those who have recently been through a separation are at higher risk than those who have been separated for a longer time. This is hypothesised because the 'time since separation' for those in the 'single parents' group from Te Rau Hinengaro was not assessed so the single parents may have never been partnered, or may have been separated for up to decades, allowing them time to deal with and overcome any mental health issues post-separation and thus, report lower levels of mental health issues.

If so, this would indicate that the mental health trajectory of separated parents may escalate in the two years after separation (as indicated by the mental health prevalence in this study) but then decrease as time since separation increases (as indicated by the lower prevalence of mental health issues in Te Rau Hinengaro). The suggestion that mental health may change over time is supported by the finding in this study that the longer parents had been separated, the lower their subjective wellbeing (but had only been separated up to two years). This important aspect was further assessed in Study 2 where mental health issues were found to decrease again, as time since separation increased beyond two years.

Results of the current studies compared to Te Rau Hinengaro (Beautrais et al., 2006) showed that a larger proportion (20.5%) of recently separated parents had suicidal ideation than adults in the general New Zealand population (3.2%). This is a significant increase in suicidal ideation between studies and may be a result of the unique circumstances that a separated parent experiences within two years of separation (such as relocation of household, financial burden, loss of a romantic partner, loss of contact with child/ren, increase in mental health issues, conflict with ex-partner, disruption of 'everyday life', etc).

Previous research from overseas, and New Zealand, supports the higher rate of suicidal ideation in separated people compared to the general population (Ferguson, 2005; Fukuda & Takaoka, 2008; Gibb et al, 2011; Kposowa, 2000; Kposowa, 2003). Therefore, due to the high

prevalence of suicidal ideation found in separated adults it is important to identify those who may be at risk of suicide after a marital dissolution. Assessment should be incorporated as a step in any support programme offered to those people who are going through a marital dissolution.

This increase in suicidal behavior may also be a result of sample selection bias, as those who were more affected by their relationship breakup may have completed this study as they are more emotionally connected to the subject of 'separation' than someone who had a relatively easy separation. On the contrary, the data show that the majority of people thought that the separation was a positive change and that they wanted the separation in the majority of cases. This reduces the chance that social selection bias has affected the rate of suicidal ideation in this sample. Furthermore, this result may also be a result of the sample size which if increased would improve the reliability of the results.

Furthermore, the discrepancies found between the mental health prevalence seen in the participants from Te Rau Hinengaro and the separated parents from these studies may have arisen due to the differences in methods of assessment used to obtain mental health data. Although Te Rau Hinengaro is the best reference point to compare mental health prevalence from these studies with, the scales used to measure mental health in these studies are different from the categorical DSM-IV type data collected in Te Rau Hinengaro. Therefore, the definition of 'caseness' may make equivalence between the samples difficult to determine. The most likely result of this would be that these studies would have found higher rates of mental health more easily than the categorical criteria used in Te Rau Hinengaro, as may be highlighted by the results reported above. Therefore, this should be taken into consideration when reporting the results.

Substance use was found to be higher in recently separated parents than the general population, partnered parents or the single parents group, and this is supported in previous research. For example, Power et al (1999) showed that males and females who have been through a marital dissolution are heavier drinkers than those who have not been through a marital dissolution and

Umberson and Williams (1993) showed that divorced fathers exhibit higher rates of psychological distress and substance use than married males. However, prevalence of heavy substance use in this sample of separated parents is not as high as has been found in other samples (Chatav & Whisman, 2007; Power et al, 1999). The reliability of this result can be supported by the results of Te Rau Hinengaro which also showed a low rate of substance use in partnered parents and single parents as opposed to the other mental health issues (Tobias et al., 2008).

No other previous literature in New Zealand has examined the substance use rate of parents post-separation. Therefore, this result may reflect a cultural difference, as the two studies which have been conducted on this topic in New Zealand have found a lower prevalence of substance use in separated parents than overseas research has.

Finally, this result could also be due to the measurement scales used to capture alcohol use and drug use being too stringent, but reliability and validity results of the MAST and DAST have consistently been found to be high in previous research (Gibbs, 1983; Staly & El-Guebaly, 1990; Teitelbaum & Mullen, 2000; Yudko et al, 2007). Therefore, as it is unclear why this has occurred, further research should investigate this result and the speculations behind it.

The mental health results discussed so far are consistent with the only other known study on the relationship of mental health and separation in New Zealand. The CHDS study conducted by Gibb et al (2011) also showed that separation was associated with depression, and suicidal behaviour. Furthermore, the results found in the current sample of recently separated parents are in line with previous research conducted in overseas samples on divorced or separated people across multiple cultures including Australia, China, United Kingdom, Norway, Canada, Netherlands and United States of America, which have found an increased rate of depression (Bruce & Kim, 1992; Davies et al, 1997; Hardy & Wadsworth, 1997; McCombs-Thomas & Forehand, 1993; Overbeek et al., 2006; Zhong et al., 2010), anxiety (Afifi et al, 2006; Hardy & Wadsworth; 1997; Overbeek et al., 2006), alcohol or substance abuse (Hardy & Wadsworth, 1997; Mastekaasa, 1997; Overbeek et

al., 2006; Williams & Dunne-Bryant, 2006; Umberson & Williams, 1993), general poorer mental health (Lee & Gramotnev, 2007) and suicidality (Ferguson, 2005; Fukuda & Takaoka, 2008; Gibb et al, 2011; Kposowa, 2000; Kposowa, 2003) in separated adults.

Bear in mind that very little research has been conducted on parents who have separated, but the overseas research is consistent, with their samples having higher rates of mental health issues than married parents (Afifi et al, 2006; Booth & Amato, 1991; Demo & Acock, 1996; Varner & Mandara, 2009).

Predictors that influence mental health. The second part of the first aim was to assess predictors related to separation and mental health and analyse their affect on post-separation mental health.

An important result was that a shorter time since separation was found to predict better subjective wellbeing. Therefore, as time since separation increased, parents' subjective wellbeing decreased. A change in mental health over time has been suggested in previous research (Strohschein et al., 2005; Sweeney & Horowitz, 2001; Varner & Mandara, 2009; Williams & Dunne-Bryant, 2006) and this aspect will be discussed further in the following sections.

Furthermore, a lower level of education predicted poorer mental health. This is consistent with previous research suggesting that those who are more likely to have mental health issues are more likely to have lower levels of education (Chang-Quan , Zheng-Rong, Yong-Hong, Yi-Zhou, & Qing-Xiu, 2010; Swendsen et al., 2009). A low level of education is a good predictor of low socio-economic status (Dohrenwend et al., 1992) and low socio-economic status has also been associated with poorer mental health (Adler et al, 1994; Kaplan, Roberts, Camacho, & Coyne, 1987; Murphy et al, 1991). Therefore, lower levels of education or lower socio-economic circumstances may be used as an indicator of those at risk of mental health issues post-separation.

The current studies found that the more mental health issues in a parent's history pre-separation, the poorer their mental health, the lower their subjective wellbeing, and the heavier the substance use post-separation. A history of substance use was also related to more substance use post-separation. This is consistent with previous research which has shown that those who have one mental health issue are at higher risk of having co-morbid mental health issues (Barlow & Durand, 2005; Kessler, Chiu, Demler, & Walters, 2005). Furthermore, previous research supports that those who have a history of a mental health issue are more likely to experience further mental health issues when going through a distressing event, such as a separation, than those who do not have a history of mental health issues. For example, Butterworth and Rodgers (2008) found that a history of mental health issues is a predictor for future mental health issues. Therefore, mental health history needs to be closely assessed in separated parents in order to assess a parent's risk of mental health issues such as depression, anxiety, stress and substance use.

Additionally, as mental health issues interfered with more aspects of a parent's life, their level of subjective wellbeing decreased. This shows that the more a person reports having experienced mental health issues since the separation (reporting a low subjective wellbeing), the more important it is to help alleviate any mental health issues, as the mental health issues are interfering with their life more severely. Thus, those who feel that they have experienced a period where they: felt sad, blue and depressed almost every day; lost interest in most things like work, hobbies or things they usually enjoy; felt anxious, tense or worried most of the time and/or felt extremely stressed most of the time since the separation, need to be targeted for treatment, in order to alleviate the mental health issues and the interference the issues may be having on their life.

Moreover, the worse a separated parent rated their financial situation, the lower their subjective wellbeing and the poorer their mental health. This fits with previous research, which has shown that those who have financial burden post-separation have poorer mental health (Strohschein et al., 2005; Varner & Mandara, 2009; Williams & Dunne-Bryant, 2006). This needs further

research in order to tease out the predictors and causality of the relationship. It may be that financial hardship leads to stress which leads to poorer mental health or it could be that mental health issues resulting from separation lead to lower daily functioning which leads to less time at employed work and thus, lower income. At this point, the direction of the relationship is not clear, however, financial burden may still be used to identify those who may be at risk of post-separation mental health issues.

Predictors that surrounded the separation itself also affected mental health. For example, the less the separated parent wanted the separation, the lower their subjective wellbeing, and the poorer their mental health. Additionally, the more a separated parent thought that the separation was a positive change for the short term, the better their subjective wellbeing, and the better their mental health and the less suicidal ideation the parent reported. The thought that the separation would be a positive change for the long term was also related to lower suicidal ideation. Therefore, if a separated parent did not think that the separation is a positive change in the short term, he or she was likely to have poorer mental health (depression, anxiety and/or stress) and to have thought more about suicide than someone who thought the change is positive. If they did not think it is a positive change in the long term, they are likely to report higher suicidal ideation. Perhaps those who work with separated parents could help to establish with the parent how this life event may be a positive change in the short and long term. If the parent has difficulty in perceiving it in this way, it is important that the mental health of the parent is assessed and the risk of suicide is also assessed and discussed.

This "positive change" aspect has not been assessed in literature before, so the present result would benefit from further research which aims to replicate the findings. However, one study found that those who suffer from depression and then separate from their partner, and view the separation as a positive life change, can experience remission from their depression (Cohen et al, 2007). This reinforces the result that whether a person believes that separation will result in a positive change or

not can affect mental health status. Furthermore, results from a study by Simon and Marcussen (1999) support the idea that individuals experience better mental health when their behaviours (such as separating) and their beliefs (such as "the separation will be a positive change) are consistent rather than inconsistent. Therefore, beliefs on the positivity on the change may be another factor worth incorporating into post-separation support programs.

Furthermore, in line with these results, negative thoughts on the separation (those who were less involved in the initiation of the separation; had not wanted the separation; were satisfied in their relationship; and did not think the separation was a positive change in the short or long term) predicted lower subjective wellbeing, poorer mental health, and more suicidal ideation. These results suggest that positive thoughts on the separation are associated with reduced psychological distress and negative thoughts on the separation are associated with increased psychological distress. This result is supported by previous research showing that female initiators who had separated in the past two years had less depression than non-initiators (Sweeney & Horowitz, 2001). Therefore, those engaging with separated parents should assess whether these predictors are present in a separated person in order to better gauge how fragile the parent's mental health may be.

As level of resentment from the separated parent towards the ex-partner increased (in other words as they had less forgiveness), the lower the subjective mental health, and the poorer the mental health. Previous research has also found that a higher level of forgiveness has an important positive influence on mental health (Cano & O'Leary, 2000; Coyle, & Enright, 1997; Rye et al., 2004). Therefore, in future, those who work with separated parents could focus on forgiveness and reducing resentment towards the ex-partner in order to not only facilitate the development of a better mental health trajectory post-separation, but a better relationship between the ex-partners. This would benefit the post-separation adjustment of not only the parents, but also the child/ren involved.

In line with these results, the more positive the relationship with their ex-partner was (low conflict, high forgiving, ease in developing day-to-day care plans, and not going through Family Court), the better the subjective wellbeing, and the better the mental health was. As discussed, forgiveness has shown to have an important influence on mental health in the current studies and in previous research (Cano & O'Leary, 2000; Coyle, & Enright, 1997; Rye et al., 2004). Furthermore, conflict with the ex-partner has also been found to relate to poorer mental health post-separation. For example, Whiteside (1996) found that spousal conflict seemed to associate with mental health issues, such as depression and anxiety. Additionally, Marchand-Reilly (2009) found that conflict with a romantic partner was a significant predictor of depressive symptoms in young adults. Therefore, these predictors could provide good indication of those who may be at risk of mental health issues post-separation.

Next, the higher a parent scored on the secure attachment scale, the better their mental health was post-separation. Also, the higher a parent scored on the anxious attachment scale, the poorer their mental health was. These results are plausible because the development of secure attachment relationships as a young child allows them to know that their needs for soothing, comfort and protection from danger will be met (Svanberg, Mennet & Spieker, 2010). This secure attachment in childhood becomes the foundation in adulthood for social competence and self-esteem, improved emotional self-regulation and self-reflective capacities (Fonagy, 2001; Svanberg et al, 2010). Thus, it has been found that securely attached individuals are more resilient to difficult life circumstances than those who are insecurely attached (Belsky & Fearon, 2002; Edwards, Eiden, & Leonard, 2006; Moss, Smolla, Cyr, Dubois-Comtois, Mazzarello, & Berthiaume, 2006; Stein et al, 2002). It has also been found that individuals with negative attachment styles in the general population have shown poorer mental health (such as higher levels of depression) than those who had positive attachment styles (Permuy, Merino & Fernandez-Rey, 2009). These findings may explain why attachment style could serve as a predictor of poor mental health in separated parents.

Furthermore, the previous research adds reliability to the finding that those with secure attachment have better mental health than those with more avoidant or more anxious attachment styles.

However, this result may also occur because those who are able to develop secure attachments with their romantic partner are likely to have secure attachments in relationships elsewhere (Baldwin, Keelan, Fehr, Enns & Koh-Rangarajoo, 1996), which may provide support for the separated person post-separation. Previous research has also found that securely attached people are more likely to seek out support when they need it than those who are not securely attached, which may help to alleviate any mental health issues that do arise (Florian, Mikulincer, & Bucholtz, 1995). Thus, post-separation, attachment style also relates to mental health and could help to identify those at higher risk of mental health issues post-separation.

Furthermore, the level of suicidal ideation increased as the mental health issues increasingly interfered with a parent's work; or if they did not know where to get help. These results are important as they may provide further areas which may be able to identify those at risk of suicide post-separation. These results highlight a necessity to publicise support for those who have separated. Being male also predicted higher suicidal ideation post-separation and will be discussed in the next sub-section.

The findings of this section show the high amount of psychological distress that mothers and fathers experience when transitioning out of a marriage or de facto relationship. It seems that this psychological distress persists for at least two years post-separation (as time since separation was found to increase subjective wellbeing in this sample that had separated in the past two years). This finding is supported by previous literature (Bruce & Kim, 1992; Davies et al, 1997; Hardy & Wadsworth, 1997; Overbeek, et al, 2006; Simon & Marcussen, 1999; Strohschein et al., 2005; Wade & Pevalin, 2004). The predictors found in this section provide a set of focal points for the assessment of a separated parent, in order to assess the fragility of their mental health.

The high prevalence of mental health issues that have been found in this sample is of concern, especially as separation and divorce are now common phenomena. As discussed earlier, children of parents with mental health issues have a much higher chance of experiencing mental health issues themselves than children of non-depressed parents (Coyne & Downey, 1991) and are also at higher risk for numerous other problems (Billings & Moos, 1983; Jaenicke et al., 1987; McCombs-Thomas & Forehand, 1993; Radke-Yarrow, 1998). Therefore, this suggests that more should be done to help alleviate depression and other mental health issues in recently separated parents as soon as possible. This would help the parents, as well as reduce any impact of parental mental health issues on the children. In addition, some of the results in this study have replicated previous findings, suggesting good reliability in the data. Therefore, the remaining results that identify new predictors that influence mental health post-separation can also be considered reliable and should be put in place in assessments of separated parents.

Sex differences. The final part of this aim was to investigate sex differences. There were no sex differences found between level of subjective wellbeing, mental health or substance use and this is consistent with previous literature (Gibb et al, 2011; Strohschein et al., 2005). For example, the CHDS study, which looked at relationship separation and mental health issues in a sample from New Zealand, found no differences in mental health between sexes (Gibb et al, 2011). Overseas research also reports this finding (Strohschein et al., 2005). However, over time, secondary stresses such as decreased income have been found to impede the recovery from (or even increase) mental health issues, particularly in females (Strohschein et al., 2005; Sweeney & Horowitz, 2001; Varner & Mandara; 2009; Williams & Dunne-Bryant, 2006). This could suggest that males and females may proceed along different paths in the adjustment to separation and the time when participants are analysed in a cross-sectional study may affect whether sex differences are found (and what sex differences are found). Therefore, in order to account for this, Study 2 measured the variables five

months later to assess whether the sexes follow different paths of adjustment over time. This will be discussed in the next sub-section.

On the other hand, suicidal ideation was found to be significantly higher in males post-separation than it was for females. Sex differences existed despite the difference in time since separation between the two groups. Furthermore, being male was a signficant predictor of higher suicidal ideation post-separation. This result is consistent with previous research which suggests that males going through a separation or marital dissolution are at higher risk of suicidality than their female counterparts (Kposowa, 2000; Kposowa, 2003).

Males were also less likely than females to seek help because they did not think anything would help them, and because they did not want to appear as having mental health issues. These sex differences show the importance of allowing support to reach males who are separating, and making support accessible without any consequences that they may be concerned of (such as losing the day-to-day care of their child/ren).The result that fathers show higher suicidality than mothers post-separation is an important aspect, and interventions (especially for fathers), need to be put in place in order to support these parents post-separation.

This result, however, may be a result of sample selection bias. Only 27% of this sample were male, and those males who completed this study, as discussed before, may have been more emotionally affected by their separations and felt more compelled to complete this study than those who were less affected. This should not stop interventions being put in place immediately for fathers (and mothers) who may need support post-separation in order to reduce the suicidality of this group of parents. Furthermore, just because a more heavily affected sample of fathers may have completed this study, and may not represent all males who separate, does not reduce the importance of the result. There is obviously a group of males out there who are seriously affected by separation. In the mean time, further research must be conducted on the suicidality of separated parents; what they find difficult; and how support can be developed to reach those in need of it.

Change over time and sex differences. Study 2 assessed the changes in mental health over five months; and investigated sex differences in the variables measured. Parents did not have significantly different levels of mental health or substance use at Time 2 than they had at Time 1. Both males and females showed an increase in subjective wellbeing over time and both males and females showed a decrease in suicidal ideation from Time 1 to Time 2. It was unexpected that mental health and substance use did not change over time. However, the time between each study may not have been long enough to capture a significant change. Therefore, studies which incorporate a longer period between surveys need to be conducted to explore this issue. As discussed earlier, a change in mental health over time has been suggested in previous research (Coryell et al, 1992; Strohschein et al., 2005; Varner & Mandara, 2009).

Results revealed a significant interaction of sex in the change in suicidal ideation from Time 1 to Time 2. Males showed a significant decrease in the level of suicidal ideation at Time 2 as opposed to Time 1, while females' suicidal ideation only slightly decreased. This is an important finding, as it shows that suicidal ideation escalates post-separation but then decreases again. It cannot be determined as to why this occurred, so further research should assess the differing circumstances for males and females post-separation and assess whether changes in circumstances post-separation can account for this sex difference in suicidality over time. Furthermore, the trajectory of suicidal ideation should be monitored more closely to identify times when suicidal ideation is highest, and at what point it starts declining again.

This is an interesting result, as conversely, in Study 1 it was found that as time since separation increased subjective wellbeing decreased and rates of all mental health issues were high in this sample at this point in time post-separation. Therefore, it seems that a range of mental health issues escalate immediately prior to separation but then deescalate over time. These results may be indicating a peak of mental health issues between Time 1 and Time 2 when the two waves of data were collected. This provides further support for a change in mental health trajectory over time with

mental health issues escalating in the two years' post-separation and then declining again around the two year mark. A more in depth longitudinal study, with more frequent assessments is required to assess this change more accurately. However, previous research has also found that unhappiness, distress and depression largely subside two to three years after separation (Amato, 2000).

Poor mental health at Time 1 was a significant predictor of lower subjective wellbeing at Time 2. Time 1 predictors of poor mental health at Time 2 were having a less secure attachment style, and having poorer mental health. Predictors of higher suicidal ideation at Time 2 were more substance use at Time 1, and a poorer relationship with their child/ren at Time 1. These predictors support previous results already discussed, and are supported by previous literature also discussed earlier. However, an important new predictor to emerge is that a poor relationship with their child/ren at Time 1 increases the risk of suicidal ideation at Time 2.

This is an important finding due to the implications it has on those who work with parents who are separating. It was hypothesised that parents who lose the day-to-day care of their child/ren, spend less time with their child/ren post-separation and have a worse relationship with their child/ren post-separation, have poorer mental health. The current studies confirm this hypothesis. This result will be discussed further in a later section.

Heavy substance use at Time 1 predicted heavier substance use at Time 2. This is consistent with previous research which has shown that those who are more likely to engage in substance use are more likely to have pre-existing mental health issues such as a history of substance abuse (Swendsen et al., 2010). Therefore, a history of substance use can be used as predictor for those at risk of substance use post-separation.

Mental health summary. In summary, the findings confirm the mental health advantage of being in a relationship and reveal that in the short term, the transition out of a relationship increases psychological distress in mothers and fathers. For the first aim, this study found that the recently

separated parents score higher on the depression scale than those in the general population. It is important to note that although a minority of people experience symptoms of anxiety, stress, substance use and suicidal ideation in the sample of recently separated parents, and the samples used for comparison, the results of this study show that all of the mental health issues measured are occurring more often in recently separated parents than in the other comparison groups of people in New Zealand.

There are a number of important predictors that relate to mental health and substance use that have been discussed, and should be addressed in support/treatment programs offered to those who are separating. These include current and historic mental health issues; how severely affected one's life is; financial situation; level of education; how much they wanted the separation; if they were satisfied in their relationship; whether they initiated the separation; level of forgiveness; attachment style; time since separation and beliefs on if it is a positive change. The only sex difference in mental health between males and females is that suicidality is higher in males post-separation than it is for females. Therefore, it is clear that the chronic stress of separation affects the mental health of those who separate, but even more so in parents who have separated in the past two years. Finally, results showed that although there is an escalation in mental health issues in recently separated parents, they seem to peak when parents have been separated for around two years, and then they start declining in prevalence again.

3. Parenting Practices of Recently Separated Parents

Parenting practices. For the second aim, the current studies investigated the parenting practices of this sample. Parents scored within the average range on the positive parenting and the negative parenting scales (King et al., 2007) and had a score just below the mean on the parenting self-efficacy scale (Johnston & Mash, 1989). This indicates that the parents themselves, do not

think of they are as good a parent as a parent in the general population would think of themselves. However, this could be a consequence of the higher rates of depression reported in this sample or it may be that they feel as though they are a bad parent by putting their child/ren through a separation. The causes behind the lower parental self-efficacy scores need further clarification in future research[10].

It was stated earlier that parenting self-efficacy is a good predictor of level of parenting. Therefore, a lower parenting self-efficacy score may suggest that separated parents have slightly poorer parenting than normal. However, the average separated parents score was only slightly lower than the average range. Considering that the separated parents' positive and negative parenting scores from the APS were within the average range, it is unlikely that the parenting self-efficacy score indicates that the parenting is worse in separated parents compared to the general population. Therefore, it is not sensible to conclude that the parenting of separated parents is any worse than parents who have not separated.

The finding that there are no differences in the parenting of separated parents post-separation compared to parents in the general population has also been concluded, most notably, by a high quality longitudinal study in Canada which found more similarities than differences in parenting between separated parents and partnered parents (Strohschein, 2007). Other research, however, has suggested that many of the different post-separation stressors result in a diminished quality of parenting (Hetherington, 1993; Hetherington & Stanley-Hagan, 1999; Short, 2002) possibly because parents are pre-occupied with their own adjustment problems (Greene et al., 2003; Noller, Feeney, Sheehan, Darlington & Rodgers, 2008; Tritt & Pryor, 2005). However, the only evidence of this occurring in the current studies is that, as parenting self-efficacy increased over time, so did subjective wellbeing. This is also discussed later. Therefore, further research in New Zealand should aim at replicating a study on level of parenting post-separation, in order to provide a more

[10] Confounding variables which may be influencing these results are discussed in Section 4.

robust result. This would include improving the methodology by conducting observational studies of parents, as well as using a larger number of parenting measures, and including a control group.

Post-separation, almost one third of the sample saw their child/ren less than they did before the separation; over one third saw their child/ren about the same amount of time; and one third of the parents saw their child/ren more. The main type of parenting plan post-separation was sole care by one parent (73.2% of plans) and only one quarter of plans involved shared care. These results are consistent with previous research (Bauserman, 2002; Juby et al, 2005; Pruett & Hoganbruen, 1998; Seltzer, 1998). However, the current studies show that shared care agreements in New Zealand are becoming more common in those who develop day-to-day care plans without the help of the Family Court, as indicated by previous New Zealand and Australian research (Ritchie, Friesen, Woodward & Vertue, 2009; Smyth, 2004). This is shown by the result that for parents who develop child care arrangements between themselves, 31.6% of them had a shared care plan, and 68.4% had a sole care arrangement, whereas, for parents who went to the New Zealand Family Court in order to resolve child care arrangements (30% of the total sample), 12.1% of them had a shared care plan, 84.8% had a sole care arrangement (includes sole care awarded to the mother or father) and 3.1% had another type of arrangement.

In New Zealand, about 30% of parents fight over the day-to-day care plans of their child/ren (Ritchie et al., 2009) and statistics from the New Zealand Family Court in 2005 showed that, in 394 of 706 (65%) hearings about day-to-day care cases, judges awarded care to the sole mother, whereas only 97 of 706 (14%) of child care cases resulted in shared care (Su-Wuen, 2007). This shows that parents who develop a parenting plan without the help of legal services, choose a shared care plan more often than a shared care plan is developed when parents need legal services to help develop their parenting plan[11].

[11] This is a simplistic view of day-to-day care arrangements as those who go through the Family Court are usually in high conflict with each other. As discussed further on, conflict can have negative effects on the children involved in the separation and therefore it is best to allocate sole care to one parent in order to minimize the level of conflict the child/ren are exposed to. Therefore, this may explain why more sole day-to-day care is allocated by the Family Court.

These results are important for both the parents and children involved, as parents who lose day-to-day care of their child/ren are at a significant risk of mental health issues (Bokker et al, 2006; Stone, 2006). Additionally, the loss of a parent is, reportedly, the most negative aspect of parental separation for a child and with limited contact with one parent, relationships can weaken over time (Hetherington & Kelly, 2002; Kurdek & Siesky, 1980). Moreover, there is substantial evidence in the previous literature that the loss of relationship with a parent can impact child adjustment (Bender, 1994; Kelly, 2005; Smyth, 2005).

For example, McCombs-Thomas and Forehand (1993) showed that father-adolescent relationship was predictive of adolescent functioning. Furthermore, parental separation increases the risk for short-term effects such as social and emotional maladjustment and academic failure and long term effects can include future unemployment and early child bearing (McLanahan, 1999). Therefore, the importance of maintaining healthy relationships through shared care (when appropriate) with both parents post-separation should be stressed in New Zealand. Service providers need awareness of the potential consequences when they are working with those who may be experiencing a separation or a parental separation and/or when they are developing child-care arrangements post-separation with separating parents. However, the implications of conflict should also be taken into account.

All parents in the current studies had at least one area of conflict with their ex-partner. Forty six percent had one issue and 25% of the sample had conflict with their ex-partner over four or more issues. For both males and females, ‘finances’ were the most common cause of conflict, with about 70% of separated parents in conflict over this. ‘Transitions from one parent to the other’, and ‘the rules and routines in the two homes’, were the next two most common forms of conflict for males and females with about half of males and females in conflict on these topics. About one third of males and females had conflict over the ‘parenting plan’ of guardianship issues. ‘Health decisions’ were a more common conflict for the males to have with their ex-partner than the

females, with one third of males in conflict about health decisions for their child/ren. 'Schooling' was the least common source of conflict but was still difficult for 25% of the males and 15% of the females.

It is quite commonly found that separated parents are engaged in some form of conflict, most notably over disagreements in parenting practices and beliefs (Kelly, 2005), the finances, or the rules and routines (Long & Forehand, 1987). As every participant had at least one source of conflict with their ex-partner, and some of the conflict levels found in this sample of New Zealand parents are rather high, it seems there should be more support and services in place. This is especially needed from services outside of the New Zealand Family Court in order to keep the conflict to a minimum and/or resolve the different areas of conflict between parents. As post-separation conflict seems to be inevitable, learning to deal with the conflict and the ex-partner in a positive way is important.

This is important as a high level of conflict in separated families can reduce the benefits of seeing both parents regularly (Grych & Fincham, 1993; Mo Yee, 2002). A large body of research demonstrates that conflict between parents is associated with an increased risk for psychological problems among children in all families, whether the parents are married or separated (Ahrons & Miller, 1993; Ahrons & Tanner, 2003; Amato & Keith, 1991; Emery, 1982; Johnston & Roseby, 1997; McCombs-Thomas & Forehand, 1993; Otto, Buffington-Vollum, & Edens, 2003). Higher levels of parental conflict may lead to poorer parenting and poorer parent-child relationships due to parents' emotional resources being consumed by conflict (Noller, et al, 2008; Tritt & Pryor, 2005). Moreover, further research has found that anger-based marital conflicts were significant predictors of children's angry behaviours (Jenkins, 2000) and the lowest level of adolescence adjustment was found in high-conflict separating families (Noller et al., 2008). This information also increases the importance of reducing parental conflict in New Zealand through intervention.

Predictors that relate to parenting variables. As a second part of this aim, predictors were also investigated that may relate to different parenting styles. Parents who scored higher on the positive parenting practices scale also scored higher on the parenting self-efficacy scale. This is a plausible finding as those who provide consistent parenting would rate themselves as a better parent than a parent who is inconsistent. In the reverse direction, those who believe they can parent effectively may feel more confident in their interactions with child/ren and thus have more opportunities to develop a quality relationship with them (Stone, 2006). Additionally, Coleman and Karraker (1998) stated that parental self-efficacy beliefs have emerged as a powerful direct predictor of positive parenting practices and results found in a study by Stone (2006) suggests that parenting self-efficacy may be a critical factor in the development of a high quality father-child relationship post-separation. These findings support a relationship between these two variables.

Next, those who had more items of conflict with their ex-partner tended to rate their financial situation lower; and were more likely to be going through the New Zealand Family Court for a day-to-day care dispute. This correlation also is plausible as those who have financial strain are under more stress which may lead to more conflict with their ex-partner about finances and other areas. Furthermore, a person with financial strain may be suffering financially due to the other parent with-holding money because of a pre-existing conflict. This pre-existing conflict could develop into conflict over other areas such as the child/ren's living plan, rules and routines and so on.

Furthermore, separated parents who are high in conflict, especially over the day-to-day care of their child/ren, attend the Family Court in order for a third party to help with the conflict (Johnston, Campbell & Mayes, 1985), and Family Court costs may cause financial stress which again, may explain why those who have more conflict, have more financial strain.

There were no significant predictors of level of positive or negative parenting at Time 1. This may have occurred because there were no variables that were measured which related to parenting practices. It may have also occurred because the separated parents exhibited relatively normal levels

of parenting and therefore, variables such as conflict, level of education, financial situation and so on are more likely to associate with lower quality parenting. As parenting quality was in the average range for positive and negative parenting in this sample, perhaps the current studies could not find this association.

Sex differences. The next part of this aim was to investigate sex differences in parenting variables post-separation. Females were more likely than males to have sole care of their child/ren post-separation, to spend more time with their child/ren post-separation than they did pre-separation, and to have a better relationship with their child/ren post-separation than they had pre-separation. This is commonly found in all previous literature from overseas countries and New Zealand (Bauserman, 2002; Kelly, 1994; Ritchie et al., 2009; Simons et al., 1999).

There were no differences in the parenting of males and females post-separation, even though males and females spent different amounts of time with their child/ren post-separation, and had different levels in quality of relationship with their child/ren post-separation. No sex differences were found between sexes in the average data presented by the authors of some of the scales either (Johnston & Mash, 1989) adding reliability to these findings. This is an important finding and indicates that post-separation fathers can parent just as well as mothers and vice-versa. Such a lenience towards the mother having sole care of the child/ren may be an old-fashioned and unfair tradition put in place by out-dated societal conventions (Smyth, 2004) especially when there is solid research to suggest that, when appropriate, there are many benefits of having both parents involved in the child-rearing for parents and child/ren (Bender, 1994; Bokker et al, 2006; Kelly, 2005; Smyth, 2005; Stone, 2006).

However, these results are inconsistent with some previous literature which has shown that there are sex differences in the type and level of parenting post-separation (Greene et al., 2003). This may have arisen because this research has been conducted recently in a New Zealand sample

which may differ from overseas samples, or it may have arisen due to the measures used to assess parenting variables in this study.

Change over time and sex differences. The changes in parenting variables over five months and the sex differences in parenting variables were assessed. Again, there were no differences in parenting between sexes at Time 2. The only change observed in the parenting measures was that the recently separated parents scored just below average score range of parenting self-efficacy at Time 1 but at Time 2 scored within the average score range for parenting self-efficacy. This suggests that separated parents may go through a change over time, as parents are gaining more confidence in their parenting as time goes on, which shows that any detrimental effect that separation may have on their parenting self-efficacy is high after separation but then decreases over time. The results are consistent with previous research which has shown that parental strain increases after separation (Hetherington & Stanley-Hagan, 1999; Umberson & Williams, 1993) but that parenting problems that increase after separation also eventually decrease over time (Hetherington, 1993; Sandler et al., 2006).

There may be no change in parenting over time but again, five months may not be a long enough time to catch a significantly different change in parenting practices. However, it may also be that separated parents have a normal quality level of parenting practices and thus, there is no need for change over time. Therefore, these results may be important in order to develop ideas for future research to catch a possible change in parenting, over a longer period of time.

Furthermore, it was found that over time, the relationship with their child/ren (quality of relationship, time spent with child/ren, and day-to-day care plans) changed. However, this was moderated by sex. Males' relationship with their child/ren increased over time, whereas females' relationship with their child/ren decreased over time. At Time 1, females had a significantly better relationship with their child/ren than males had with their child/ren, but at Time 2, this difference was no longer significant. This indicates that separation changes the parent-child relationship over

time differently depending on sex. However, the differences observed in parent-child relationships disappear as time since separation increases. This finding has not been reported before and needs to be replicated.

The change in the parents' relationship with child/ren over time may occur because conflict, parenting strain and difficulties parents face decrease over time (Hetherington, 1993; Maccoby & Mnookin, 1992; Sandler et al., 2006); or because mental health issues decrease over time (as found in the current studies and other previous research; e.g. Amato, 2000). When conflict and mental health issues decrease the clarity of the parenting role and parent-child interactions have been found to increase (Noller, et al, 2008; Tritt & Pryor, 2005). Furthermore, these changes would allow for more co-operative co-parenting, which may result in parents establishing a shared care arrangement for their child/ren. A lower level of conflict between ex-partners has been found to determine better father-child relationships post-separation (Funder, 1993). Supporting these speculations, previous research has highlighted the importance of low conflict co-parental relations to better parent-child interactions and higher quality of relationships post-divorce (Amato, 1998; Kielpikowski, Pryor & Jose, 2008; Tritt & Pryor, 2005).

These results are important as they show that over time, the positive relationship between parent and child/ren can increase. This may have some important implications for those who work with separating parents, in order to provide hope that the relationship can get better over time. It also suggests that day-to-day care arrangements early in the separation should be reconsidered at the later stage when parent child relationships, parenting self-efficacy, and mental health issues have improved and level of conflict has decreased.

Parenting practices summary. Recently separated parents scored well on the parenting scales in the current studies and there were no significant differences in parenting found between sexes at Time 1 or over time. However, there were some sex differences in other parenting variables

post-separation. It was found that parenting self-efficacy increased from Time 1 to Time 2. Furthermore, they are the first results in New Zealand to examine parenting practices post-separation. It is an important finding, that parenting does not seem to be of lower quality in separated parents. However, this should be read with caution as more measures used to assess parenting in the current studies could have been used in order to be more thorough. Finally, a change in relationship with child/ren over time was found. For males, relationship with their child/ren increased over time, but the relationship with their child/ren for females decreased over time.

4. The Relationship Between Mental Health and Parenting Variables

Mental health and parenting variables. The final aim in Study 1 was to investigate the relationship between mental health and parenting variables in those who have recently separated. First, the higher the parenting self-efficacy score was, the better the parents' mental health was. This may indicate that as mental health increases so does their parenting ability, or vice versa. This relationship has been found in previous research (DeGarmo et al, 2004; Taylor & Andrews, 2009; Webster-Stratton & Hammond, 1988). However, this may also just reflect that those who have poor mental health (especially depression) think of themselves negatively, and thus, even if their level of parenting may be good, they may rate it poorly which would result in a finding such as the one above. This is plausible given the high rate of depression in this sample. As it is not possible to determine the causality of this relationship, future research should aim to tease out the relationship between these variables.

Secondly, the more conflict a parent had with their ex-partner, the poorer their mental health was. Additionally, as a parent rated it harder to develop a day-to-day care plan post-separation with their ex-partner, there was a decrease in subjective wellbeing, and an increase in mental health

issues. This shows that a high-conflict uncooperative relationship with the ex-partner is associated with poorer mental health. Previous research shows that conflict between ex-partners focuses more on the child/ren (Emery, 1994) and that these types of conflicts have the potential to negatively affect a parent's emotion and post-separation adjustment (Amato, 2000; Goodman, 1993; Masheter, 1991). Furthermore, it has been found that those who are finding the separation harder to deal with emotionally (typically non-initiators who tend to be males) engage in conflict, particularly over custody, in order to maintain contact with their ex-partner (Sbarra & Emery, 2005).

These results show that a high level of conflict with their ex-partner is associated with poor mental health. Thus, parents high in conflict should be targeted for treatment regarding these mental health issues.

Those who had been through the New Zealand Family Court in order to resolve day-to-day care disputes with their ex-partner had lower subjective wellbeing than those who had not. Furthermore, any mental health issues that they suffered from interfered with more aspects of their lives than the mental health issues experienced by separated parents who did not attend the Family Court. This suggests that those who go through the Family Court have more severe mental health issues than those who do not. A final important result was that as parents had less day-to-day care with their child/ren post-separation, level of suicidal ideation increased.

These results give the first indication of such a phenomenon in New Zealand (alluded to in previous overseas research; Bokker et al, 2006; Stone, 2006); that those who attend court over day-to-day care disputes have higher rates of more severe mental health issues and have lower subjective wellbeing, They also show that those who lose the day-to-day care with their child/ren are at higher risk for suicidal ideation. The loss of contact with the child/ren post-separation has been associated with increases in mental health issues among noncustodial fathers (Umberson & Williams, 1993). However, this is some of the first research in New Zealand to show that those who lose day-to-day care with their child/ren, report higher levels of suicidal ideation. Although these

results may suggest that the loss of relationship and daily care of their child/ren increases mental health issues and suicidal ideation, it may also be that those with more mental health issues and higher suicidal ideation are not allocated day-to-day care of the child/ren as this may put the child/ren at risk of harm.

Sex differences. For both males and females, as the relationship with the child/ren improved, the level of mental health issues decreased. However, this relationship was more pronounced for males than it was for females, indicating that a father's mental health is more heavily affected by the loss of relationship with a child/ren post separation than a mother's mental health is. This is supported by previous research (Stone, 2006) and also by results from Study 2 which showed that the loss of quality of the relationship with their child/ren was reportedly harder for more males to deal with post-separation than it was for females. This may occur because more often, males tend to see their child/ren less post-separation and feel that the relationship with the child/ren is worse than before the separation. Therefore, males may be more heavily affected by the loss of relationship with the child/ren than females are. Furthermore, adding to these results, a signficant predictor of a higher level of suicidal ideation at Time 2 was having a poor relationship with their child/ren at Time 1.

This relationship may also occur in the reverse direction. Parents who are going through a separation and are also experiencing mental health issues may not be able to parent as well, and have as good a parent-child relationship, as those who are not affected by mental health issues. This direction of the relationship has also been found in previous research (Cox, Puckering & Pound, 1987; Taylor & Andrews, 2009).

Finally, this result may be affected by other predictors. For example, females are more likely to seek help and support if they are alone and/or having difficulties with mental health issues post-separation than males are, which may alleviate some mental health stress placed upon them (Oliver,

Pearson, Coe & Connell, 2005). Secondly, this may also be the result of the small sample of males, which (as discussed earlier) may have a self-selected bias. This, in turn, may be resulting in the males reporting being more affected by the loss of relationship with their child/ren than females, thus producing this significant result. Future research should aim to 1) replicate this result with a larger sample of males and females; 2) find out the causality of the relationships; and 3) establish any causes behind the sex differences.

Change over time and sex differences. The final aim was to investigate the relationships between mental health variables and parenting variables longitudinally. An interesting observation resulting from exploratory data analysis is that Study 1 found that as time since separation increased, the level of subjective wellbeing and the level of parenting self-efficacy decreased. Whereas at Time 2, Study 2 found that time since separation was related to a decrease in suicidal ideation, as well as an increase in subjective wellbeing and parenting self-efficacy. In other words, it seems that as scores on the measures of mental health decreased so too did the parents' belief in their parenting, but when mental health improved at Time 2 so too did their belief in their parenting ability. This type of relationship between mental health and parenting has been suggested in previous research (DeGarmo et al, 2004; Stone, 2006; Taylor & Andrews, 2009; Webster-Stratton & Hammond, 1988). As suggested earlier however, the relationship between self-efficacy and mental health may be impacted by the mental health status of the parent. Thus, these results need to be read with caution.

An important predictor of suicidal ideation at Time 2 was the relationship with child/ren at Time 1. The poorer the relationship with the child/ren (spent less time with them post-separation, felt the relationship had deteriorated post-separation, and had less day-to-day care of their child/ren), the higher the suicidal ideation at Time 2. At Time 1, females had a significantly better relationship with their child/ren post-separation than males did, and males reported significantly

higher levels of suicidal ideation than females did. However, at Time 2 the relationship with the child/ren had improved for males, and deteriorated for females, and there were no longer any significant differences between males and females on this variable. Interestingly, the males' high level of suicidal ideation also significantly decreased over time, and there was no longer a significant difference between males and females on this variable at Time 2 either. This suggests that males' (and to a lesser degree females') mental health trajectory post-separation is associated with the quality and quantity of their relationship with their child/ren post-separation. Previous research suggests that a worse relationship with the child/ren post-separation is associated with poorer mental health (Bokker et al, 2006; Cohn et al, 1990; Lyons-Ruth et al, 2000; Weissman & Paykel, 1974).

It is important to note that the mental health of parents (especially males) is impacted by the loss of quality of relationship with their child/ren post-separation. Therefore, the awareness of the importance of maintaining a quality relationship between parent and child should be increased to those who separate and those who work with separating families. This is an important aspect of research to investigate in New Zealand and is in dire need of research, especially in a large sample with a high recruitment rate of both males and females.

Mental health and parenting variables summary. The results assessing the relationship between the mental health and parenting variables of recently separated parents have shown a number of relationships to exist between mental health and parenting practice variables. Importantly, the higher the level of conflict between parents, the higher the level of mental health issues experienced in separated parents. Parents had higher mental health issues as the relationship with their child/ren post-separation worsened, and this relationship was more pronounced for males than it was for females. Additionally, a poor relationship with the child/ren at Time 1 predicted higher suicidal ideation at Time 2. Results of exploratory analysis showed that when males' level of

suicidal ideation was high, the relationship with their child/ren was poor, but as the relationship with their child/ren got better, their level of suicidal ideation decreased. This result needs further investigation. Furthermore, that mental health and parenting practice trajectories post-separation seem to mirror each other in that as mental health increases at Time 1, parenting self-efficacy decreased but at Time 2 when mental health issues decrease, parenting self-efficacy increased. This relationship also needs further investigation.

5. Strengths and Limitations

Strengths. The current studies are characterised by a number of methodological strengths. The design features included reliable and valid psychometric instruments; a cross-sectional as well as a prospective longitudinal design; multi-item scales; a high sample retention rate; a sample of both female and male parents that is representative of New Zealand ethnicity and is well-distributed around New Zealand. The reliability of the results is strengthened by the fact that reliable scales were used, and that results which are well-established in previous literature have been replicated by the results of the current studies. Validity in the results is strengthened as results are plausible and translate meaningfully into everyday life. Additionally, the scales and measures used have established validity. Finally, another strength of this study is the high level of statistical power obtained.

Limitations. It should be acknowledged that although the current studies corrected some limitations of past research by using a prospective web-based survey (and all the benefits a web-based survey provides); using multiple reliable scales; by measuring many types of mental health; by including males and females; by recruiting a larger sample size; and by adding a longitudinal component; some limitations are still present in this research.

Firstly, the recruitment of male participants was much lower than for female participants. A lot of effort was concentrated on recruiting a sample with an even sex distribution, but after a month of recruitment, it was clear that more males were needed. Therefore, the principal researcher contacted numerous men's groups and created advertisements targeted towards males. However, in order to complete a longitudinal study over five months, recruitment had to be completed before the end of May. Therefore, the number of males in the study was lower than anticipated. The small sample of males may have impacted on the results and therefore, future research should attempt to eliminate this limitation by allowing a more comprehensive and longer recruitment process focused on recruiting males.

Secondly, the current studies had only a moderate sample size. These studies had aimed to recruit 120 or more participants, however only 112 participants completed and met the selection criteria for the first study and only 88 participants completed the second study. Although this sample size is higher than previous research samples in this field of literature and allowed high statistical power, a larger sample size would have been better. Further research should allow for a longer amount of time to complete the research and advertise for a longer period of time to recruit more people. However, this was not possible in the time frame for completing a Master's thesis.

Another limitation to the current studies is that of sample selection bias. This sample of parents may be a highly selected sample that was exposed to greater levels of stress and emotional turmoil post-separation than the wider population of separated parents. This may be because those who were most affected by the separation felt more compelled to complete such a study, whereas those who were less affected may not. The sample selection bias may have increased heterogeneity in mental health, thereby increasing the ability of the study to detect differences. However, the data shows that most people thought that the separation was a positive change and that they more or less wanted the separation. Therefore, it is unlikely that social selection bias has impacted heavily on the

results in this study (e.g. level of suicidal ideation). However, one should still be cautious when translating these results to the relevant populations.

Furthermore, the discrepancies found between the mental health prevalence seen in the participants from Te Rau Hinengaro and the separated parents from these studies may have arisen because the scales used to measure mental health in these studies are different from the categorical DSM-IV type data collected in Te Rau Hinengaro as discussed earlier. Future research should aim to eliminate this discrepancy by also including into their research measurements and criteria similar to that used in Te Rau Hinengaro. The discrepancies between these measurements and their implications should be taken into consideration when interpreting the results on differences in prevalence between the samples.

A further limitation of the current study is the use of retrospectively recalled measures of parenting practices and mental health. It is possible that reports were subject to biases inherent in self-reported data. However, it is difficult to overcome this limitation as conducting behavioural observations of the parents was not only unfeasible in terms of the timeframe for a Master's thesis, but it was also subject to further limitations including expense, social desirability, and observer bias. Furthermore, the web-based survey design was employed so as to reduce the amount of self-report bias as much as possible.

There was a weakness in these studies in the ability to find differences in parenting ability over time and between sexes. It may be that separated parents do not have different levels of parenting compared to partnered parents, and that there are no sex differences post-separation. However, a larger number of more thorough parenting measures would have increased the validity and reliability of these findings. Therefore, although these results indicate that there is no difference in the parenting of recently separated parents, more research is needed before this result can be substantiated.

Another important limitation is that 98.9% of the sample had dependent children (children under the age of 18). Therefore, these results cannot be generalized to parents who only have independent children. As separated parents who have children under the age of 18 are at higher risk of mental health issues post-separation (e.g. depression) than those with children over the age of 18 (Sweeney & Horowitz, 2001; Williams & Dunne-Bryant, 2006), this may have caused inflated results in this sample, than would occur in a sample which included parents with independent children. Generalizing these results to other groups of separated people may result in an over-representation of mental health issues than actually exists in that sample.

One further limitation, discussed earlier, is that if a parent's mental health was poor there was no way to determine whether their self-assessments of parenting self-efficacy were accurately reflecting their actual parenting ability and this may be influencing the results. Future research with larger time and lower budget constraints could consider observing parents or conducting interviews in order to establish a person's parenting ability independently. They could also consider assessing the level that mental health issues may be affecting their answers on their own parenting ability. It may also be beneficial in future research to include more measures of parenting practices and mental health measures.

However, notwithstanding these limitations, the results of this study clearly suggest that for this sample, linkages between separation and mental health; separation and parenting variables; and post-separation mental health and parenting variables do exist.

6. Implications and Future Directions

Implications. The current studies and the results are of particular relevance to New Zealand due to the paucity of research in this area not only in New Zealand but worldwide, and also due to the high amounts of people in this country who are implicated by them.

Mental health issues have been shown to be more prevalent in New Zealand parents who have separated in the past two years. This highlights that mental health services and those who work with separating parents need to provide more readily available support for those who need it, especially due to the impact mental health can have not only on the parent, but also on the child/ren involved. This would include educating all those who may come into contact with parents and/or children from separating families (e.g. doctors, psychologists, social workers, teachers, lawyers etc.) on the outcomes of separation for both parents and children, and how to get the required support. Additionally, the high rate of suicidality in this sample of parents is of concern and definitely needs to be addressed by the relevant New Zealand Government departments, as well other service providers who work with separating parents. This would include providing accessible, affordable support not only through the New Zealand Family Court, but also in the community away from the 'perceived negativity and the consequences' of mental health or parenting issues that can be associated with the Family Court. More specifically, mental health services are needed which focus on appealing to males in order to get them the help and support that they need post-separation in order to reduce the high suicidality rate.

The current studies indicate a number of predictors that relate to a separated person being at higher risk for mental health issues, which should be assessed within service providers. If these can be identified, those who are at risk of mental health can be provided the support that they need, as well as being able to focus on the aspects of separation that are the hardest for them, and pose the highest risk to their adjustment process. For example, a comprehensive community campaign aimed at advertising an "Online Separation Assessment" for parents going through a separation could be established. This assessment could ask separated parents numerous questions regarding the separation and predictor variables found in this study, and could give the parent some feedback on their situation and where to go and what to do from their current circumstances. It could provide a) the names of appropriate service providers, b) free or discount vouchers to service providers, c)

statistics on parents who go through separation and the normative stress and strain involved in separation, d) importance of getting help for themselves and their child/ren, e) what aspects of separation they may need to focus on (in order to reduce risk of mental health issues post-separation) and so on.

The results of the parenting practices found in separated parents are also important for New Zealand. They show that separated parents are no worse at parenting than other parents, as indicated by their scores on the positive parenting and negative parenting scales. A change over time was found in parental self-efficacy, which showed that as time went on, parents became more confident again as a parent. Furthermore, it is important to note that males and females do not differ in parenting practices post-separation. Therefore, when appropriate, males and females should be given shared care as often as possible, especially as the literature shows the benefits of shared care for parent and child adjustment when there is a good relationship between the parents post-separation. Perhaps, this could indicate to services such as the New Zealand Family Court to re-assess child care arrangement plans where sole day-to-day care was awarded, after six months or so in order to reassess whether parents could now share the care of the child/ren. Furthermore, they should stress the importance of maintaining a healthy parent-child relationship with parents who lose day-to-day care of their child/ren, for the post-separation adjustment of both the parents and the child/ren.

In addition to this, the results on post-separation child care arrangements show that sole care is being awarded in a majority of cases and this may be a result of force and habit. Furthermore, as the relationship with the child/ren got worse post-separation, the poorer the mental health got. A poor relationship at Time 1 also predicted more suicidal ideation at Time 2. Therefore, it may be beneficial to reassess the process of developing child care plans in New Zealand, especially when the parents and children's adjustment may rest on the quality of the parent-child relationship post-separation as indicated in the current studies, and the previous research. This may have huge

implications on the processes currently in place to develop day-to-day care plans used in the New Zealand Family Court and other service providers. It also provides recognition to separated parents and reinforces that recently separated parents generally are having a hard time dealing with their circumstances and highlights the importance of providing support to these parents.

A number of important zero-order correlations were found and these will be of importance again to those working with separating parents as they can use them to guide intervention and assess those who are at risk of mental health issues. As a result, this may alleviate the high rates of mental health issues seen in this sample of separated people, and thus alleviate some of the detrimental effects of separation on the increasing amount of parents and children affected by separation each year.

The results on the areas of conflict post-separation, re-affirms to those who are working with conflicting parents, the important areas to address in order to reduce conflict between ex-partners. More importantly, conflict with the ex-partner was associated with poorer mental health. This is an important finding, and suggests that the mental health of those going through the New Zealand Family Court is worse than those who do not go through the Family Court. It also suggests that those who separate but have high levels of conflict also have worse mental health than those with low levels of conflict. This is a critical point for intervention and service providers need to aim to reduce the conflict between ex-partners and the negative effects is has on both the parents and the children.

A final important finding was that the mental health of parents' increases immediately after separation occurs and stays prevalent up until around the two year mark where mental health issues seem to start decreasing again. This provides hope to those who are struggling with the separation that over time things should get better and also indicates that it may be beneficial to reassess day-to-day care plans after two years. If parents did not receive day-to-day care of their child/ren due to a large amount of conflict, or because of poor mental health immediately after separation, then these

results suggest that after two years when conflict and mental health issues may have decreased, they may be more suitable for day-to-day care. As previous research (discussed earlier) highlights the importance of maintaining a healthy parent-child relationship with each parent for both the benefit of the child and the parents adjustment then this result should be considered seriously.

Future directions. As a result of this study, there are many needed areas of future research. Further research is needed to assess the reliability of some of the "never seen before" results. This includes further research on the level of substance use post-separation and why substance use may be lower than other studies have found overseas. These studies also found post-separation, attachment style to relate to mental health and this could help to identify those at higher risk of mental health issues post-separation. Future research should aim to explain why this relationship occurs.

Further research with a large sample size needs to be conducted to assess if separated parents are more suicidal than the general population and if males are more suicidal than females. They should also assess the mental health trajectory of males and females and if they differ over time as a function of different factors post-separation. For example, it may be that males experience higher levels of suicidal ideation because the relationship with their child/ren is worse post-separation but as this relationship gets better over time, so does the males suicidal ideation. On the other hand, as females tend to get day-to-day care post-separation and also have a better relationship with their child/ren post-separation, perhaps their mental health changes over time as a function of another aspect of separation such as reduced income.

Further research should examine the reasons why those with suicidal ideation post-separation do not know where to seek help, and should investigate which parts of life are the hardest for them to cope with and are escalating their suicidal ideation.

Additionally, research should focus on level of forgiveness as an intervention and assess the interventions effect on separated parents. The "positive change" aspect has not been assessed in literature before, thus the result would benefit from further research which aims to replicate this result.

Future research in New Zealand should aim at replicating a study on level of parenting post-separation, in order to provide a more reliable and established result. Research should investigate in more depth, the sex differences in day-to-day care plans, financial situations, New Zealand Family Court involvement, the level of parenting post-separation, the level of conflict between parents that children are exposed to post-separation and the relationships that exist between these variables.

There has been some suggestion from literature and now the current studies, that those who go through Family Courts to dissolve day-to-day care disputes have higher rates of poor mental health. These results give the first indication of such a phenomenon. Further research on the processes, difficulties, support and services of the Family Court is needed on this sub-sample of separated parents in order to provide them with the help and support that they need.

As observed in the current studies, measuring the effects of separation is a complex process and although significant relationships were identified, the causal direction of some of the relationships could not be established. Therefore, future research aiming to establish the causal direction of relationships between post-separation predictor and dependent variables is needed. For example, further research should, aim to establish whether the stress of the conflict affects mental health, or if poor mental health leads to conflict between ex-partners.

Results of this study showed that the mental health of separated parents changes over time. However, more research needs to be conducted which assesses the separated parents at more frequent time intervals in order to assess more specifically, how long mental health issues increase post-separation, when they peak, and when they begin to decline. Replication of the current studies which assess parents over a longer period of time need to be conducted. They could then, assess

how long it takes for the mental health of separated parents to return back to mental health rates similar to that of the general population and whether males and females mental health trajectory follow different paths as a function of different gender-specific post-separation circumstances.

Studies that incorporate measurements of these variables over a longer period of time, and include many different measures of parenting, may be able to capture this relationship at a statistically significant level and establish the direction of causality. There has been no previous research which has assessed the relationship between mental health and parenting practices over time. Therefore, more research needs to be conducted in order to further confirm whether a relationship between parenting and mental health does exist over time.

Establishment of causality between post-separation variables; an assessment into the mental health trajectory of those who experience different post-separation circumstances; and further replication of the results from these studies, would allow for theoretical work on divorce and separation to be developed, which at this point in time is lacking in the literature. Theoretical literature on separation and divorce would help to provide a clearer picture of separation and subsequent adjustment processes.

7. Conclusion

The current studies have undertaken to study the mental health and parenting practices of recently separated parents in New Zealand. Overall, this study has demonstrated that higher levels of depression affect the average separated person post-separation; that parents who have separated have higher rates of mental health issues such as depression, anxiety, and suicidal ideation. Furthermore, it was found that males exhibit higher levels of post-separation suicidal ideation than females. A range of predictors found to relate to mental health were discussed.

There were no obvious differences seen in the parenting styles of separated parents compared to the general population, and there were no differences in parenting between sexes. However, level of

parenting self-efficacy increased from just below the average score range to within the average score range from Time 1 to Time 2. There were some important findings regarding day-to-day care, Family Court involvement, level of conflict and relationship with the child/ren post-separation, with sex differences playing an important role.

Mental health and parenting variables were shown to relate to each other in several ways. Importantly, a worse relationship with the child/ren post-separation at Time 1 predicted a higher level of suicidal ideation at Time 2.

The findings are consistent with and extend upon previous research and provide a detailed description and analysis of the circumstances of recently separated parents in New Zealand. It is hoped that these findings can begin to help those who work with separated parents to provide better care and support for those who need it by being able to understand the needs and circumstances of parents and their children who have recently been through a separation. Finally, this research provides a cogent argument for the establishment of a longitudinal, government-funded study of separating and separated parents.

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Appendix A

College of Science

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UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

The Mental Health and Parenting Practices of Recently Separated Parents

INFORMATION SHEET

You are invited to participate in a research project entitled "The Mental Health and Parenting Practices of Recently Separated Parents". We know that parents who are separated are under a lot of stress. We also know that it can be difficult to manage your usual parenting activities when you are separated. We want to find out about the stresses that separated parents face so that we can understand the kinds of difficulties that separated parents experience. We want to measure any psychological problems that people experience in the first year after separation, and also measure the ways that they parent their children after separation. Then we want to follow your progress after a period of five months to see how things change in that time. We are also interested in any differences between men and women in these areas. The aim of the project is to increase our understanding of the issues for parents in this situation, and ultimately promote the development of more effective help designed to make this difficult time easier for parents and their children. The outcome of this project is that we will know more about what supports families need when they are working through separation.

Miss Kirsten Ritchie is the Principal Researcher in this project at the University of Canterbury. Miss Ritchie has completed a Bachelors Degree in Science, majoring in Psychology, and has completed a Bachelors of Arts with Honours (First Class) degree, also in Psychology. This year, Kirsten is completing her thesis in order to obtain her Master of Science degree in Psychology. Kirsten can be contacted by email at khr19@uclive.ac.nz or by telephone on 3642987 ext 3638.

Dr Fran Vertue is the Principal Supervisor of this research project. Dr Vertue is a Clinical Psychologist who is a lecturer at the University of Canterbury. She also provides counselling and prepares psychological reports for the Family Court. Fran can be contacted by email at fran.vertue@canterbury.ac.nz or by telephone on 364 2987 ext 7708. She will be pleased to discuss any questions you may have about participation in the project.

To participate in this project, you must be a parent who has had a final separation after the 31st of March 2009. If you agree to participate in the project, you will be asked to complete two online surveys during 2010 over a 6-month period. The first survey will take approximately 30 minutes and the second survey will take approximately 15 minutes. While the results of the project may be published, the information presented will be group information, not information from individuals. The completed thesis will be held in the collection of the library at the University of Canterbury, but will contain no information pertaining to any individual. Any information you provide will be strictly confidential, and will not be disclosed to any other person or organisation. To ensure complete confidentiality, your email address and any additional characteristics that may identify you as a participant are collected only for consent, and to send out reminders for the second survey later in the year. This information will be available only to the Principal Researcher and will be secured on a locked computer in a locked office within the Psychology Department. Your survey information will be assigned a code number and the only people who will have access to the matching of code numbers and the email addresses of the participants are the Principal Researcher and her supervisors. The results of this project may be published in academic journals and presented at academic conferences.

Given that the topics you will be discussing are of a personal nature, it is possible that you may feel distressed if your feelings are strongly affected. If this does occur, please contact the Senior Supervisor, Dr Fran Vertue, on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. Dr Vertue can also make recommendations about services that

deal with depression, anxiety, drug and alcohol abuse, and parenting. Because Dr Vertue will not have access to the list of email addresses and the code numbers, she will not be able to identify your information in the study. If you should become distressed, you will be able to leave the survey and either clear all the information you have entered, or save it and complete it when you are feeling more comfortable.

In the event that you have concerns that you may harm yourself, please contact the Psychiatric Emergency Service in your area immediately. You will find this number in the White Pages of your telephone directory under "Hospitals and other health service providers". The Psychiatric Emergency Service can also help direct you to other appropriate services if you so wish. In the event that you have concerns about the safety of your children, please contact CYFS immediately on **0508 FAMILY (0508 326 459).**

You have the right to withdraw your participation in the project at any time, including withdrawal of any information you have provided, until your survey data have been added to the others collected by the end of June 2010 (for the first survey) and by the end of October 2010 (for the second survey). The results of the study should be finalised by the end of February 2011, and a brief report will be posted onto the website where you completed the surveys so that you can see what the results are.

This study has been reviewed and approved by the University of Canterbury Human Ethics Committee.

To thank you for your participation, on completion of the second survey, you will be entered into a draw for 1 of 3 $100 vouchers (your choice of a Westfield shopping voucher or a fuel voucher). We are hoping to recruit 120 people, but cannot predict how many people will take part.

If you would like a copy of this information sheet, please contact Kirsten by email on khr19@uclive.ac.nz.

By clicking on the "next" button to complete the survey, you consent as follows:

I have read and understood the description of the above-named project and I am aware that I will complete two surveys over the next five months. On this basis I agree to participate in the project, and consent to publication of the results of the project with the understanding that anonymity will be preserved.

I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided, until my survey data have been added to the others collected. I understand that if at any time I become emotionally distressed while completing the survey, I will be able to leave the survey and either clear all the information I have entered, or save it and complete it when I am feeling less distressed.

I note that the project has been reviewed and approved by the University of Canterbury Human Ethics Committee.

Appendix B

The Mental Health and Parenting Practices of Recently Separated Parents - Survey 1

WEB PAGE ONE – General Demographics

A. DEMOGRAPHICS

A1. Please enter your email address:
A2. Please enter the year you were born. :
A3. Please specify which gender you are.
Male/Female
A4. What ethnicity do you belong to?
NZ Maori, NZ European, Australian, Other European (English, Dutch, Scottish, etc), Asian or Central Asian (Chinese, Korean, Japanese etc), Pacific Island, Middle Eastern, Indian or Pakistani, North African, Other (Please specify).

A5.
i) What country do you live in:
New Zealand, Australia, Other (Specify)
ii) If NZ, what city do you live closest to?
Auckland, Wellington, Christchurch, Dunedin, Tauranga, Hamilton, Other (Specify).

A6. What is the highest level of education you have completed?
Please choose only one of the following:
No Formal qualifications, high school qualifications, tertiary/trade/technical qualification below degree level, Bachelors degree, masters or higher level degree.

A7.
i) What are your current living circumstances?
Living with parents, living in a flat, living with partner, living by yourself, living in hostel/residential accommodation, other (please specify).
ii) How long have you lived in your present household? (in years)

A8. What is your employment status? Please choose all that apply:
Full-time, Part-time/Casual, Voluntary, Homemaker, Student, Retired, Unemployed.

A9.
i) In which category does your total weekly income fall (from all sources, after tax and other deductions and in NZ$).
Zero, 1-100, 101-150, 151-200, 201-250, 251-300, 301-400, 401-500, 501-700,700-1000, 1000+, Can't Say.
ii) How would you rate your current financial situation?
High, Fairly High, Medium, Fairly Low, Low, Can't Say

If you should become distressed while completing this survey, please contact Dr Fran Vertue on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. In the event of a crisis, such as concerns about the safety of yourself or your children, please contact the Psychiatric Emergency Service or CYFS in your area immediately. You will find the number for the Psychiatric Emergency Service in the White Pages of your telephone directory under "Hospitals and other health service providers". CYFS has a national call-centre, and their number is 0508 FAMILY (0508 326 459).

WEB PAGE TWO – Background

A10.
i) For how long did you know your ex-partner (in years)?
ii) For how long did you and your ex-partner live together (in years)?
iii) For how long were you and your ex-partner married (in years, if at all)?

iv) **How satisfied were you with the relationship overall on a scale of 1-5 where 1 = not at all satisfied and 5= very satisfied?**

v) **On how many occasions did you and your ex-partner separate (including final separation)?**

vi) **How long has it been since your first separation with your ex-partner (months)?**
Enter number, or N/A.

vii) **How long has it been since your final separation with your ex-partner (months)?**

viii) **Who initiated the final separation?**
Self, Partner, Mutual, Don't Know.

ix) **How much did you want the final separation (On a scale of 1-5 where 1= Not at all and 5=absolutely wanting the separation)?**

x) **Do you feel as though you were wronged by your ex-partner?**
Yes/No, if yes. Forgiveness Questionnaire.

xi) **Think of how you have responded to your separation from your ex-partner. Indicate the degree to which you agree or disagree with the following statements. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. If you are unable to answer a specific question as it does not apply to your situation please put a 9 in for Not Applicable.**

I can't stop thinking about how I was wronged by this person.
I wish for good things to happen to the person who wronged me.
I spend time thinking about ways to get back at the person who wronged me.
I feel resentful toward the person who wronged me.
I avoid certain people and/or places because they remind me of the person who wronged me.
I pray for the person who wronged me.
If I encountered the person who wronged me I would feel at peace.
This person's wrongful actions have kept me from enjoying life.
I have been able to let go of my anger toward the person who wronged me.
I become depressed when I think of how I was mistreated by this person.
I think that many of the emotional wounds related to this person's wrongful actions have healed.
I feel hatred whenever I think about the person who wronged me.
I have compassion for the person who wronged me.
I think my life is ruined because of this person's wrongful actions.
I hope the person who wronged me is treated fairly by others in the future.

xii) **Do you think this separation is a positive life change for the short term?**
Yes/no

xiii) **In the long term do you think this separation will be a positive life change?**
Yes/no

xiv) **Are you in a new relationship?**
Yes/no

A11. What are the day-to-day care plans for your children between you and your ex-partner?

I have full time care (more than 50% of the time I care for the children).
My ex-partner and I share day to day care almost evenly.
I see my children but my ex partner cares for them more than 50% of the time.
I do not see my children.
Other arrangement (please specify).

A12.

i) **How many friends/family members could you count on for emotional and practical support in the past year? Please give a number of people.**

ii) **How much time would you spend with a supportive friend/family member per week in the last year? Please give a number of hours.**

iii) **How much emotional support have you received from friends/family (empathy, understanding, advice)? Please give a rating from 1-5 where 1 = none and 5= a tremendous amount.**

iv) **How much practical support have you received from friends/family (money, childcare, DIY)? Please give a rating from 1-5 where 1 = none and 5= a tremendous amount.**

v) **Have you had any other type of help since the separation (i.e. parenting courses, church help, Parenting through Separation programme, counselling etc)?**
Yes, Please specify/ No

A13. How many serious relationships have you had that included children (your children or their children)?

A14. Did your parents separate?

Yes/No

A15. Indicate the degree to which you agree or disagree with the following statements. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree.

I find it relatively easy to get close to others.
I'm not very comfortable having to depend on other people.
I'm comfortable having others depend on me.
I rarely worry about being abandoned by others.
I don't like people getting too close to me.
I'm somewhat uncomfortable being too close to others.
I find it difficult to trust others completely.
I'm nervous whenever anyone gets too close to me.
Others often want me to be more intimate than I feel comfortable being.
Others often are reluctant to get as close as I would like.
I often worry that my partners don't really love me.
I rarely worry about my partner(s) leaving me.
I often want to merge completely with others, and this desire sometimes scares them away.

If you should become distressed while completing this survey, please contact Dr Fran Vertue on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. In the event of a crisis, such as concerns about the safety of yourself or your children, please contact the Psychiatric Emergency Service or CYFS in your area immediately. You will find the number for the Psychiatric Emergency Service in the White Pages of your telephone directory under "Hospitals and other health service providers". CYFS has a national call-centre, and their number is 0508 FAMILY (0508 326 459).

WEBPAGE THREE – Parenting and Parenting Style

B. PARENTING

B1. Please provide a description of your biological children

Child 1, 2, 3, 4, 5, 6, age, gender, in your day to day care now? N/A

B2. Please provide a description of any other children you have parented

Child 1, 2, 3, 4, 5, 6, age, gender, in your day to day care now? N/A

B3. Do you spend more or less time with your children since the final separation?

More, About the same, Less, Don't Know.

B4. Do you feel as though your relationship with your children is as good as it was before the separation?

I feel my relationship with my children has become better since the separation.
I feel my relationship with my children is about the same since the separation.
I feel my relationship with my children has worsened since the separation.
I cannot say.

B5. i) Generally, how difficult has it been to reach agreement about custody arrangements with your ex-partner? Rate yourself on a scale of 1-5 where 1= extremely easy and 5= extremely difficult.

iii) Have you attended the Parenting Through Separation programme run by the Family Court.

Yes/No

iii) Have you been through or are currently going through the Family Court to sort out a dispute with your ex-partner over the day to day care (custody) arrangements for your children?

Yes/No

B6. The following are some statements about your family. Please read the statements and rate how much you agree with each statement. Rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. If you are unable to answer on a specific question as your child is too young please put a 9 in for Not Applicable.

I let my child know that he/she is important to me
I let my child know that he/she can talk to me about any problems.
I teach my children respect by showing them respect.
I tell my child that I appreciate what he/she tries to accomplish

When my child behaves appropriately I compliment him/her for the behaviour
I encourage my child to express his/her opinion
Once family rules have been made, I discuss the reasoning behind the rules with my child.
My children know what I expect of them, but they also feel free to discuss those expectations with me when they feel they are unreasonable.
When my child misbehaves I am willing to listen to reasons why.
I find it interesting and educational to be with my child for long periods.
I give my children direction for their behaviour and I expect them to follow my direction, but I am willing to listen to their concerns and discuss that direction with them.
I listen to my children's opinions when making family decisions, but I will not decide on something simply because the children want it.
I always encourage verbal give-and-take whenever my children feel that family rules and restrictions are unreasonable.
Whenever I tell my children to do something, I expect them to do it immediately without asking questions.
I expect my children to do as they are told without questioning me
I feel that in a well-run home the children should have their way in the family as often as the parents do.
I seldom give my children expectations and guidelines for their behaviour
As long as my child stays out of trouble I do not set limits.
I feel that what children need is to be free to make up their own minds and to do what they want to do, even if it does not agree with what I might want.
I often do not set limits because I want to be friends with my children.

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WEBPAGE 4 – Parenting Self Efficacy

B7. Please answer the following questions about how you have felt as a parent SINCE the separation. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree.

I would make a good model for other parents in order to learn how to be a good parent.
The problems of taking care of a child are easy to solve once you know how your actions affect your children and I have acquired this understanding.
Being a parent is manageable and any problems are easily solved.
I meet my own personal expectations for expertise in caring for my children.
If anyone can find the answer to what is troubling my children I am the one.
Considering how long I've been a parent I feel thoroughly familiar with the role.
I honestly believe I have the skills necessary to be a good parent to my children.

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WEB PAGE 5 – Mental Health History

C: MENTAL HEALTH

C1. Before you separated from your ex-partner, did you:

i) Ever suffer from depression?
Yes/No

ii) Ever suffer from anxiety?

Yes/No

iii) **Ever have a period of more than one month when you were extremely stressed?**
Yes/No

iv) **Ever suffer from alcohol or drug problems?**
Yes/No

v) **Ever suffer from any other mental health difficulties?**
Yes/No
If yes, please give details.

C2: During the past months since the separation from your ex-partner, have you:

i) **Had a period of two weeks where you felt sad, blue, or depressed nearly every day?**
Yes/No

ii) **Lost interest in most things like work, hobbies, or things you usually enjoy?**
Yes/No

iii) **Had a period of a month or longer during which you felt anxious, tense, or worried most of the time?**
Yes/No

iv) **Had a period of a month or longer during which you felt extremely stressed most of the time?**
Yes/No

C3.

i) **Who has suffered from depression in your biological family?**
No-one, Mother, father, brother, sister, grandmother, grandfather, aunt, uncle, cousin.

ii) **Who has suffered from anxiety in your biological family?**
No-one, Mother, father, brother, sister, grandmother, grandfather, aunt, uncle, cousin.

iii) **Who has suffered from alcohol or drug problems in your biological family??**
No-one, Mother, father, brother, sister, grandmother, grandfather, aunt, uncle, cousin.

If you should become distressed while completing this survey, please contact Dr Fran Vertue on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. In the event of a crisis, such as concerns about the safety of yourself or your children, please contact the Psychiatric Emergency Service or CYFS in your area immediately. You will find the number for the Psychiatric Emergency Service in the White Pages of your telephone directory under "Hospitals and other health service providers". CYFS has a national call-centre, and their number is 0508 FAMILY (0508 326 459).

WEB PAGE 6 - DEPRESSION, ANXIETY AND STRESS

C4. Please read each statement and choose a number 1, 2, 3, 4 or 5 which indicates how much the statement applied to you *over the past week*. *The rating scale is as follows:*

1 Did not apply to me at all
2 Applied to me to a small degree, or a small amount of the time
3 Applied to me to a certain degree, or some of time
4 Applied to me to a considerable degree, quite often
5 Applied to me most or all of the time

I found it hard to wind down
I was aware of dryness of my mouth
I couldn't seem to experience any positive feeling at all
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
I found it difficult to work up the initiative to do things
I tended to over-react to situations
I experienced trembling (e.g., in the hands)
I felt that I was using a lot of nervous energy
I was worried about situations in which I might panic and make a fool of myself
I felt that I had nothing to look forward to
I found myself getting agitated
I found it difficult to relax
I felt down-hearted and blue

I was intolerant of anything that kept me from getting on with what I was doing
I felt I was close to panic
I was unable to become enthusiastic about anything
I felt I wasn't worth much as a person
I felt that I was rather touchy
I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
I felt scared without any good reason
I felt that life was meaningless

If you should become distressed while completing this survey, please contact Dr Fran Vertue on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. In the event of a crisis, such as concerns about the safety of yourself or your children, please contact the Psychiatric Emergency Service or CYFS in your area immediately. You will find the number for the Psychiatric Emergency Service in the White Pages of your telephone directory under "Hospitals and other health service providers". CYFS has a national call-centre, and their number is 0508 FAMILY (0508 326 459).

WEB PAGE 7 – Mental Health and Support

C5.

i) **How much has any episode of depression, anxiety or stress interfered with your life in these areas? Please give a rating between 1-5 where 1= not at all and 5= very much. Please put a 9 in if Not Applicable.**
Your education, your work/paid employment, relationships with friends, relationships with family, relationships with your partner, hobbies, interests and related activities. Other aspects of your life (please specify).

ii) **Did you consult a doctor or seek any other advice, counselling or treatment for these problems (i.e. felling sad, stressed, anxious).**
General practitioner, psychiatrist, psychologist, counsellor, other (specify), NA.

iii) **How helpful was the treatment and support offered to you? Please give a rating between 1-5 where 1= not at all helpful and 5=extremely helpful. Please put a 9 in if Not Applicable.**

iv) **If you did not consult a doctor or seek any advice, counselling or treatment for these problems, did you have any of these thoughts? Tick all those that apply to you.**
Did not need help-could handle it yourself. Thought the problem would get better by itself. Did not think to seek help. Embarrassed to seek help. Did not know where to go to seek help. Didn't think anyone could help? Could not afford to pay for help? Afraid of what others might think? Did not want to appear as having mental health problems. Afraid you would be put into hospital. Tried to find help but couldn't. Other (please specify).

v)

a. **In the time since the separation have you thought about killing yourself?**
Yes/No

b. **In the time since the separation have you had a plan to kill yourself?**
Yes/No

c. **In the time since the separation have you made an attempt to kill yourself?**
Yes/No

d. **Did you ever think, plan or attempt to kill yourself before the separation?**
Yes/No

e. **Has anyone in your biological family made an attempt to commit suicide, which did not result in death?**
No-one, Mother, father, brother, sister, grandmother, grandfather, aunt, uncle, cousin.

f. **Has anyone in your biological family died by suicide?**
No-one Mother, father, brother, sister, grandmother, grandfather, aunt, uncle, cousin.

If you should become distressed while completing this survey, please contact Dr Fran Vertue on 03 3642987 ext 7708. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. In the event of a crisis, such as concerns about the safety of yourself or your children, please contact the Psychiatric Emergency Service or CYFS in your area

immediately. You will find the number for the Psychiatric Emergency Service in the White Pages of your telephone directory under "Hospitals and other health service providers". CYFS has a national call-centre, and their number is 0508 FAMILY (0508 326 459).

WEB PAGE 8 – Alcohol Use

C6.

i) **Since the separation from your ex partner how often have you consumed alcohol?**
Never, very occasionally, less than once a month, at least once a month, at least once a week, almost every day.

ii) **How often would you consume enough alcohol to become intoxicated?**
Never, very occasionally, less than once a month, at least once a month, at least once a week, almost every day.

iii) **How many standard drinks would you need to consume to become intoxicated?**
330ml beer, 100ml wine (there are 7 drinks in a 750 bottle of wine), 30ml spirits (there are 32 standard drinks in a 750ml bottle of spirits), cocktails (average 2 each), a shot is a standard drink. (Asking for number of each type of drink).

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WEB PAGE 9 – Alcohol Use

C7. The questions refer to the time since the separation from your ex-partner. Carefully read each statement and decide whether your answer is yes or no. Please give the answer that applies most of the time.

Do you feel you are a normal drinker? ("normal" - drink as much or less than most other people)?
Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?
Does any near relative or close friend ever worry or complain about your drinking?
Can you stop drinking without difficulty after one or two drinks?
Do you ever feel guilty about your drinking?
Have you ever attended a meeting of Alcoholics Anonymous (AA)?
Have you ever gotten into physical fights when drinking?
Has drinking ever created problems between you and a near relative or close friend?
Has any family member or close friend gone to anyone for help about your drinking?
Have you ever lost friends because of your drinking?
Have you ever gotten into trouble at work because of drinking?
Have you ever lost a job because of drinking?
Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?
Do you drink before noon fairly often?
Have you ever been told you have liver trouble such as cirrhosis?
After heavy drinking have you ever had delirium tremens (D.T.'s), severe shaking, visual or auditory (hearing) hallucinations?
Have you ever gone to anyone for help about your drinking?
Have you ever been hospitalized because of drinking?
Has your drinking ever resulted in your being hospitalized in a psychiatric ward?
Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem?
Have you been arrested more than once for driving under the influence of alcohol?
Have you ever been arrested, even for a few hours, because of other behaviour while drinking?

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WEB PAGE 10 – Drug Use

C8.

i) Since the separation have you taken any prescribed or over the counter drugs in excess of the directions for use?
Yes/No

ii) Since the separation have you taken non-prescribed or illegal drugs (excluding nicotine)?
Yes/ no. **If yes to either, web page 11.**

WEB Page 11 – Drug Use cont.

C9. The questions refer to the time since the separation. Carefully read each statement and decide whether your answer is yes or no. Please give the best answer or the answer that applies most of the time. These questions do *not* refer to alcoholic beverages.

Have you used drugs other than those required for medical reasons?

Have you over used prescription drugs?
Do you over-use more than one drug at a time?
Can you get through the week without using drugs?
Are you always able to stop using drugs when you want to?
Have you had "blackouts" or "flashbacks" as a result of drug use?
Do you ever feel bad or guilty about your drug use?
Does your spouse (or parents) ever complain about your involvement with drugs?
Has drug use created problems between you and your spouse or your parents?
Have you lost friends because of your use of drugs?
Have you neglected your family because of your use of drugs?
Have you been in trouble at work because of your use of drugs?
Have you lost a job because of drug use?
Have you gotten into fights when under the influence of drugs?
Have you engaged in illegal activities in order to obtain drugs?
Have you been arrested for possession of illegal drugs?
Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?
Have you gone to anyone for help for a drug problem?
Have you been involved in a treatment program especially related to drug use?

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Appendix C

College of Science

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UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

The Mental Health and Parenting Practices of Recently Separated Parents

INFORMATION SHEET – Second Survey

You are invited to participate in the second part of a research project entitled "The Mental Health and Parenting Practices of Recently Separated Parents". We know that parents who are separated are under a lot of stress. We also know that it can be difficult to manage your usual parenting activities when you are separated. We want to find out about the stresses that separated parents face so that we can understand the kinds of difficulties that separated parents experience. In the first survey we measured any psychological problems that people experience after separation, and also measured the ways that they parent their children after separation. Now, after five months, we want to follow your progress to see how things change in that time. We are also interested in any differences between men and women in these areas. The aim of the project is to increase our understanding of the issues for parents in this situation, and ultimately promote the development of more effective help designed to make this difficult time easier for parents and their children. The outcome of this project is that we will know more about what supports families need when they are working through separation.

Miss Kirsten Ritchie is the Principal Researcher in this project at the University of Canterbury. Miss Ritchie has completed a Bachelors Degree in Science, majoring in Psychology, and has completed a Bachelors of Arts with Honours (First Class) degree, also in Psychology. This year, Kirsten is completing her thesis in order to obtain her Master of Science degree in Psychology. Kirsten can be contacted by email at khr19@uclive.ac.nz or by telephone on 3642987 ext 3638. Dr Fran Vertue is the Principal Supervisor of this research project. Dr Vertue is a Clinical Psychologist who is a lecturer at the University of Canterbury. She also provides counselling and prepares psychological reports for the Family Court. Fran can be contacted by email at fran.vertue@canterbury.ac.nz or by telephone on 364 2987 ext 7708. She will be pleased to discuss any questions you may have about participation in the project.

To participate in this project, you must be a parent who has had a final separation in the previous two years. This second survey will take approximately 15 minutes.

While the results of the project may be published, the information presented will be group information, not information from individuals. The completed thesis will be held in the collection of the library at the University of Canterbury, but will contain no information pertaining to any individual. Any information you provide will be strictly confidential, and will not be disclosed to any other person or organisation. To ensure complete confidentiality, your email address and any additional characteristics that may identify you as a participant are collected only for consent, and to send out reminders for the second survey later in the year. This information will be available only to the Principal Researcher and will be secured on a locked computer in a locked office within the Psychology Department. Your survey information will be assigned a code number and the only people who will have access to the matching of code numbers and the email addresses of the participants are the Principal Researcher and her supervisors. The results of this project may be published in academic journals and presented at academic conferences.

Given that the topics you will be discussing are of a personal nature, it is possible that you may feel distressed if your feelings are strongly affected. If this does occur, please contact the Senior Supervisor, Dr Fran Vertue, on 03 3642987 ext 7708 or by email at fran.vertue@canterbury.ac.nz. Your confidentiality is assured, unless there are safety concerns for you or anyone else, in which case Dr Vertue will assist you to contact the appropriate service. Dr Vertue can also make recommendations about services that deal with depression, anxiety, drug and alcohol abuse, and parenting.

Because Dr Vertue will not have access to the list of email addresses and the code numbers, she will not be able to identify your information in the study.

If you should become distressed, you will be able to leave the survey and either clear all the information you have entered, or save it and complete it when you are feeling more comfortable. In the event that you have concerns that you may harm yourself, please contact the Psychiatric Emergency Service in your area immediately. You will find this number in the White Pages of your telephone directory under "Hospitals and other health service providers". The Psychiatric Emergency Service can also help direct you to other appropriate services if you so wish. In the event that you have concerns about the safety of your children, please contact CYFS immediately on 0508 FAMILY (0508 326 459). You have the right to withdraw your participation in the project at any time, including withdrawal of any information you have provided, until your survey data have been added to the others collected by the end of June 2010 (for the first survey) and by the end of October 2010 (for the second survey).

The results of the study should be finalised by the end of February 2011, and a brief report will be posted onto the website where you completed the surveys so that you can see what the results are. This study has been reviewed and approved by the University of Canterbury Human Ethics Committee.

To thank you for your participation, on completion of this second survey, you will be entered into a draw for 1 of 3 $100 vouchers (your choice of a Westfield shopping voucher or a fuel voucher). We are hoping to recruit 120 people, but cannot predict how many people will take part. If you would like a copy of this information sheet, please contact Kirsten by email on khr19@uclive.ac.nz.

By clicking on the "next" button to complete the survey, you consent as follows: I have read and understood the description of the above-named project and I am aware that I will complete two surveys in five months. On this basis I agree to participate in the project, and consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided, until my survey data have been added to the others collected. I understand that if at any time I become emotionally distressed while completing the survey, I will be able to leave the survey and either clear all the information I have entered, or save it and complete it when I am feeling less distressed. I note that the project has been reviewed and approved by the University of Canterbury Human Ethics Committee.

Appendix D

The Mental Health and Parenting Practices of Recently Separated Parents
Survey Two

WEB PAGE ONE – General Demographics

A. DEMOGRAPHICS

A.1 Which city is closest to where you live?
Auckland, Wellington, Christchurch, Dunedin, Tauranga, Hamilton, Other (Specify).

A.2 What are your current living circumstances?
Living with parents, living in a flat, living with partner, living by yourself, living in hostel/residential accommodation, other (please specify).

A.3 How long have you lived in your present household? (in years)

A.4 What is your employment status? Please choose all that apply
Full-time, Part-time/Casual, Voluntary, Homemaker, Student, Retired, Unemployed.

A.5 In which category does your total weekly income fall (from all sources, after tax and other deductions and in NZ$).
Zero, 1-100, 101-150, 151-200, 201-250, 251-300, 301-400, 401-500, 501-700,700-1000, 1000+, Can't Say.

A.6 How would you rate your current financial situation?
High, Fairly High, Medium, Fairly Low, Low, Can't Say

A.7 Please type the ages of all your children. Please put each age on a separate line.

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WEB PAGE TWO – Background

A8Think of how you have reacted to your separation from your ex-partner and then indicate the degree to which you agree or disagree with the following statements. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree. If you were not wronged by your ex-partner please still complete the survey as best as possible.

I can't stop thinking about how I was wronged by this person.
I wish for good things to happen to the person who wronged me.
I spend time thinking about ways to get back at the person who wronged me.
I feel resentful toward the person who wronged me.
I avoid certain people and/or places because they remind me of the person who wronged me.
If I encountered the person who wronged me I would feel at peace.
This person's wrongful actions have kept me from enjoying life.
I have been able to let go of my anger toward the person who wronged me.
I become depressed when I think of how I was mistreated by this person.
I think that many of the emotional wounds related to this person's wrongful actions have healed.
I feel hatred whenever I think about the person who wronged me.
I have compassion for the person who wronged me.
I think my life is ruined because of this person's wrongful actions.
I hope the person who wronged me is treated fairly by others in the future.

A9 Do you think this separation will be a positive life change in the short term?
Yes/no

A10 Do you think this separation will be a positive life change in the long term?
Yes/no

A11 Are you in a new relationship?
Yes/no

A12 What are the day-to-day care plans for your children between you and your ex-partner?
I have full time care (more than 50% of the time I care for the children).
My ex-partner and I share day to day care almost evenly.
I see my children but my ex partner cares for them more than 50% of the time.
I do not see my children.
Other arrangement (please specify).

A13 How many friends/family members can you count on now for emotional and Practical support? Please give a number of people.

A14 How much time do you spend these days with a supportive friend/family member per week? Please give a number of hours.

A15 How much emotional support do you receive now from friends/family such as empathy, understanding, and advice? Please give a rating from 1-5 where 1 = none and 5= a tremendous amount.

A16 How much practical support do you receive these days from friends/family such as money, childcare, or DIY (since the separation)? Please give a rating from 1-5 where 1 = none and 5= a tremendous amount.

A17 Indicate the degree to which you agree or disagree with the following statements. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree.
I find it relatively easy to get close to others.
I'm not very comfortable having to depend on other people.
I'm comfortable having others depend on me.
I rarely worry about being abandoned by others.
I don't like people getting too close to me.
I'm somewhat uncomfortable being too close to others.
I find it difficult to trust others completely.
I'm nervous whenever anyone gets too close to me.
Others often want me to be more intimate than I feel comfortable being.
Others often are reluctant to get as close as I would like.
I often worry that my partners don't really love me.
I rarely worry about my partner(s) leaving me.
I often want to merge completely with others, and this desire sometimes scares them away.

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WEBPAGE THREE – Parenting and Parenting Style

C. PARENTING

B1. Do you spend more or less time with your children now, than you did before the final separation?
More, About the same, Less.

B2. Do you feel as though your relationship with your children now, is as good as it was before the separation?
I feel my relationship with my children has become better since the separation.
I feel my relationship with my children is about the same since the separation.
I feel my relationship with my children has worsened since the separation.

B3 Generally, how easy is it now to reach agreement about custody arrangements with your ex-partner? Rate the ease on a scale of 1-5 where 1= not at all easy and 5= extremely easy.

B4 Have you attended the Parenting Through Separation programme run by the Family Court.

Yes/No

B5. Have you been through or are currently going through legal proceedings at the Family Court to resolve a dispute with your ex-partner over the day to day care (custody) arrangements for your child/ren?

Yes/No

B6. Have you been through or are currently going through counselling at the Family Court to resolve a dispute with your ex-partner over the day to day care (custody) arrangements for your child/ren?

Yes/No

B7. Have you been through or are currently going through mediation at the Family Court to resolve a dispute with your ex-partner over the day to day care (custody) arrangements for your child/ren

Yes/No

B8 Which of the following have been difficult for you and your ex-partner to agree about (please choose all that apply)

Transitions from one parent to the other; finances; the parenting plan; the rules in routines in the two homes; schooling; health decisions and information

B9. The following are some statements about being a parent. Please read the statements and rate how much you agree with each statement. Use a scale of 1-5 where 1= strongly disagree and 5= strongly agree. If you are unable to answer on a specific question as your child is too young please choose an answer as best as possible.

I let my child know that he/she is important to me
I let my child know that he/she can talk to me about any problems.
I teach my children respect by showing them respect.
I tell my child that I appreciate what he/she tries to accomplish
When my child behaves appropriately I compliment him/her for the behaviour
I encourage my child to express his/her opinion
Once family rules have been made, I discuss the reasoning behind the rules with my child.
My children know what I expect of them, but they also feel free to discuss those expectations with me when they feel they are unreasonable.
When my child misbehaves I am willing to listen to reasons why.
I find it interesting and educational to be with my child for long periods.
I give my children direction for their behaviour and I expect them to follow my direction, but I am willing to listen to their concerns and discuss that direction with them.
I listen to my children's opinions when making family decisions, but I will not decide on something simply because the children want it.
I always encourage verbal give-and-take whenever my children feel that family rules and restrictions are unreasonable.
Whenever I tell my children to do something, I expect them to do it immediately without asking questions.
I expect my children to do as they are told without questioning me
I feel that in a well-run home the children should have their way in the family as often as the parents do.
I seldom give my children expectations and guidelines for their behaviour
As long as my child stays out of trouble I do not set limits.
I feel that what children need is to be free to make up their own minds and to do what they want to do, even if it does not agree with what I might want.
I often do not set limits because I want to be friends with my children.

B10. Which of the following has been the most difficult for you to deal with?

The loss of quality of the relationship with my children.
The loss of quality of the relationship with my ex-partner.
The change in lifestyle or the loss of quality of lifestyle I had before the separation.
None of these things have bothered me.
I have not experienced a loss of quality in my relationships or life since the separation.

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WEB PAGE 4 – Parenting Self Efficacy and Parenting Practices

B11. Please answer the following questions about how you feel as a parent now. Please rate yourself on a scale of 1-5 where 1= strongly disagree and 5= strongly agree.

I would make a good model for other parents in order to learn how to be a good parent.
The problems of taking care of a child are easy to solve once you know how your actions affect your children and I have acquired this understanding.
Being a parent is manageable and any problems are easily solved.
I meet my own personal expectations for expertise in caring for my children.
If anyone can find the answer to what is troubling my children I am the one.
Considering how long I've been a parent I feel thoroughly familiar with the role.
I honestly believe I have the skills necessary to be a good parent to my children.

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WEB PAGE 5 – Mental Health History

C: MENTAL HEALTH

C1: In the time since you last filled out the first survey, have you:
Had a period of two weeks where you felt sad, blue, or depressed nearly every day?
Yes/No
Lost interest in most things like work, hobbies, or things you usually enjoy?
Yes/No
Had a period of a month or longer during which you felt anxious, tense, or worried most of the time?
Yes/No
Had a period of a month or longer during which you felt extremely stressed most of the time?
Yes/No

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WEB PAGE 6 - DEPRESSION, ANXIETY AND STRESS

C2. Please read each statement and choose a number 1, 2, 3, 4 or 5 which indicates how much the statement applied to you *over the last week*. *The rating scale is as follows:*
1 Did not apply to me at all

2 Applied to me to a small degree, or a small amount of the time
3 Applied to me to a certain degree, or some of time
4 Applied to me to a considerable degree, quite often
5 Applied to me most or all of the time

I found it hard to wind down
I was aware of dryness in my mouth
I couldn't seem to experience any positive feeling at all
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
I found it difficult to work up the initiative to do things
I tended to over-react to situations
I experienced trembling (e.g., in the hands)
I felt that I was using a lot of nervous energy
I was worried about situations in which I might panic and make a fool of myself
I felt that I had nothing to look forward to
I found myself getting agitated
I found it difficult to relax
I felt down-hearted and blue
I was intolerant of anything that kept me from getting on with what I was doing
I felt I was close to panic
I was unable to become enthusiastic about anything
I felt I wasn't worth much as a person
I felt that I was rather touchy
I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
I felt scared without any good reason
I felt that life was meaningless

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WEB PAGE 7 – Mental Health and Support

C3.1 How much has any episode of depression, anxiety or stress interfered with your life in these areas since the first survey? Please give a rating on a scale from not at all to very much. Please choose Not Applicable if Not Applicable.

Your education, your work/paid employment, relationships with friends, relationships with family, relationships with your partner, hobbies, interests and related activities. Other aspects of your life (please specify).

C3.2 Whom did you consult for advice, counselling or treatment for these problems (i.e. feeling sad, stressed, anxious).

General practitioner, psychiatrist, psychologist, counsellor, other (please specify).

C3.3 How helpful was the treatment and support offered to you? Please give a rating between 1-5 where 1= not at all helpful and 5=extremely helpful. Please put a 9 in if Not Applicable.

C3.4 If you did not consult a doctor or seek any advice, counselling or treatment for these problems, did you have any of these thoughts? Please choose all that apply. Please put a 9 in if Not Applicable.

Did not need help-could handle it yourself. Thought the problem would get better by itself. Did not think to seek help. Embarrassed to seek help. Did not know where to go to seek help. Didn't think anyone could help?

Could not afford to pay for help? Afraid of what others might think? Did not want to appear as having mental health problems. Afraid you would be put into hospital. Tried to find help but couldn't. Other (please specify).

C3.5 In the time since you completed the first survey, have you thought about killing yourself?

Yes/No

C3.6 In the time since you completed the first survey, have you had a plan to kill yourself?

Yes/No

C3.7 In the time since you completed the first survey, have you made an attempt to kill yourself?

Yes/No

C4. Around the time of the separation or since the separation have you experienced any of the following life events. Please rate on a scale of 1-5 as to how distressing they were for you were 1= not at all distressing and 5=extremely distressing.

Death of a friend or family member Loss of job Family arguments Serious illness of self Serious illness of friend or family member Other serious event (burglary, theft, assault etc.)

C5. Did you experience the Canterbury earthquake?

Yes/no

C6. How have the following aspects of your life been affected by the earthquake? Please answer on a five point scale where 1= not at all affected, and 5 = tremendously affected.

Your mood (mood refers to how happy or sad you have felt) Your stress levels Your anxiety levels (anxiety refers to how worried, afraid, tense and/or agitated you have felt) Your parenting Your relationships with friends/family Your relationship with your ex-partner Your relationship with your children Your level of drinking Your level of drug use

C7. Please indicate how the following aspects of your life have been impacted by the earthquake. 1= Negatively affected, 2=Not affected at all, 3=Positively affected.

Your mood (mood refers to how happy or sad you have felt) Your stress levels Your anxiety levels (anxiety refers to how worried, afraid, tense and/or agitated you have felt) Your parenting Your relationships with friends/family Your relationship with your ex-partner Your relationship with your children Your level of drinking Your level of drug use

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WEB PAGE 8 – Alcohol Use

C8 In the time since you completed the first survey, have you consumed any alcohol?

Yes/no.

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WEB PAGE 9 – Alcohol Use

C7. These questions refer to the time since the first survey, six months ago. Carefully read each statement and decide whether your answer is yes or no. Please give the answer that applies most of the time.

Do you feel you drink as much, or less, than most other people?

Have you ever awakened the morning after drinking the night before and found that you could not remember a part of the evening?
Does any relative or close friend ever complain about your drinking?
Can you stop drinking without difficulty after one or two drinks?
Do you ever feel guilty about your drinking?
Have you ever attended a meeting of Alcoholics Anonymous (AA)?
Have you ever gotten into physical fights when drinking?
Has drinking ever created problems between you and a relative or close friend?
Has any family member or close friend sought advice about your drinking?
Have you ever lost a friend or a partner because of your drinking?
Have you ever gotten into trouble at work because of drinking?
Have you ever lost a job because of drinking?
Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?
Do you drink before noon fairly often?
Have you ever been told you have liver trouble such as cirrhosis?
After heavy drinking have you ever had delirium tremens (D.T.'s), severe shaking, visual or auditory (hearing) hallucinations?
Have you ever gone to anyone for help about your drinking?
Have you ever been hospitalized because of drinking?
Has your drinking ever resulted in your being hospitalized in a psychiatric ward?
Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem?
Have you been arrested more than once for driving under the influence of alcohol?
Have you ever been arrested, even for a few hours, because of other behaviour while drinking?

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WEB PAGE 10 – Drug Use

C8.1 In the time since you completed the first survey, have you taken any prescribed or over the counter drugs in excess of the directions for use?

Yes/No

C8.2 In the time since you completed the first survey, have you taken taken non-prescribed or illegal drugs (excluding nicotine)?

Yes/ no.

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WEB PAGE 11 – Drug Use cont.

C9. These questions refer to the time since the first survey, six months ago. Carefully read each statement and decide whether your answer is yes or no. Please give the best answer or the answer that applies most of the time. These questions do *not* refer to alcoholic beverages.

Have you used drugs other than those required for medical reasons?

Have you taken more prescription drugs than you were told to?
Have you used non-prescription drugs?
Do you use more than one non-prescription drug at a time?
Can you get through the week without using non-prescription drugs?
Are you always able to stop using non-prescription drugs when you want to?
Have you had "blackouts" or "flashbacks" as a result of non-prescription drug use?
Do you ever feel bad or guilty about your non-prescription drug use?
Does your spouse (or parents) ever complain about your involvement with drugs?
Has drug use created problems between you and your partner or your parents?
Have you lost friends because of your use of drugs?
Have you neglected your family because of your use of drugs?
Have you been in trouble at work because of your use of drugs?
Have you lost a job because of drug use?
Have you gotten into fights when under the influence of drugs?
Have you engaged in illegal activities in order to obtain drugs?
Have you been arrested for possession of illegal drugs?
Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?
Have you gone to anyone for help for a drug problem?
Have you been involved in a treatment program especially related to drug use?

Appendix E

To identify the severity of each mental health issue, the scores of the items in each subscale were summed and then the score was multiplied by two. The Depression subscale consisted of items 3, 5, 10, 13, 16, 17, and 21. A score of 0-9 indicated an average level of depression, 10-13 indicated a mild level of depression, 14-20 indicated a moderate level of depression, 21-27 indicated a severe level of depression and a score of 28 or higher indicated an extremely severe level of depression. Items 2, 4, 7, 9, 15, 19 and 20 comprised the Anxiety subscale. A score of 0-7 indicated an average level of anxiety, 8-9 indicated a mild level of anxiety, 10-14 indicated a moderate level of anxiety, 15-19 indicated a severe level of anxiety and a score of 20 or higher indicated an extremely severe level of anxiety. The Stress scale consisted of items 1, 6, 8, 11, 12, 14, and 18. A score of 0-14 represented an average level of stress, 15-18 indicated mild stress, 19-25 indicated moderate stress, 26-33 indicated severe stress and a score of 34 or more indicated an extremely severe stress level.

It is important to note that the severity "labels" are used to describe the full range of scores in the population, so 'mild', for example, means that the person is above the population average but probably still well below the typical severity of someone seeking help (i.e. it does not mean a mild level of diagnosable disorder). Therefore, those who scored mild or higher (i.e. those who score higher than the general population) were included in this study as displaying that mental health issue.

Appendix F

Age **–** Year of birth was subtracted from 2010 to indicate age.

Gender – Male was coded as 1, female was coded as 2.

Highest level of education – A continuous variable for level of education was computed. No formal qualifications was coded as 0, high school qualifications was coded as 1, tertiary/trade/technical qualification below degree level was coded as 2, Bachelor's degree was coded as 3 and a Masters or higher level degree was coded as 4.

Employment status – Employment status was coded into a continuous variable in terms of level of income as follows: full time = 6, part time/casual = 5, voluntary = 4, homemaker = 3, student = 2, retired = 1 and unemployed = 0. A dichotomous variable was also created for employment. Those who were in any paid employment were coded as a '1' and those with no paid employment were coded as a '2'.

Total weekly income – Total weekly income was coded into a continuous variable as follows $0 = 0, $1-100 =1, $101-150 = 2, $151-200 = 3, $201-250 = 4, $251-300 = 5, $301-400 = 6, $401-500 = 7, $501-700 = 8, $700-1000 = 9 and $1000 or more = 10.

Current financial situation – Participants' rating of their financial status was coded as follows; high = 5, fairly high = 4, medium = 3, fairly low = 2 and low = 1.

Time since final separation- Participants indicated how long in months it had been since their final separation from their ex-partner.

Relationship characteristics.

Length of time knew ex-partner – Participants were asked to indicate in years how long they had known their ex-partner. The number of years was entered into the dataset.

Length of time living with ex-partner – Participants were asked to indicate how long in years they lived with their ex-partner. The number of years was entered into the dataset.

Number of times separated from ex-partner – Participants were asked to give a number indicating how many times they had separated from their ex-partner (including the final separation). The number of times was entered into the dataset.

Who initiated the final separation – Participants were asked who initiated the separation in their relationship. If the participant initiated the participant themselves, they were coded as a 1, those who had a mutual separation were coded as a 2 and those whose partner initiated the situation were coded as a 3. The higher the number in this variable, the more likely it was that the ex-partner initiated the separation.

How much did participant want final separation – Participants were asked to rate on a scale of 1-5 how much they wanted the final separation (where 1 = not at all wanting the separation and 5 = completely wanting the separation).

Relationship satisfaction – Participants were asked to rate on a scale of 1-5 how satisfied they were with the relationship they had with their ex-partner (where 1=extremely dissatisfied and 5=extremely satisfied).

Positive change in the short term – If participants answered 'yes' to the question "do you think this is a positive change for the short term?" they were coded as a 1 for that question, if they answered 'no' to the question, they were coded a 0.

Positive change in the long term – If participants answered 'yes' to the question "do you think this is a positive change for the long term?" they were coded as a 1 for that question, if they answered 'no' to the question they were coded a 0.

Relationship status – If participants were in a new relationship they were coded 1. If they were not, they were coded 0.

Mental health information.

History of mental health issues - If the participant indicated that they had suffered from depression, anxiety, stress, alcohol or drug problems or any other mental health issue in the past,

they were coded 1 for each category measured. If they had not, they were coded 0. The scores for each mental health item were then transformed to z-scores and summed to create a mental health history score.

Family history of mental health issues - The number of family members who suffered from depression, anxiety, alcohol or drug problems, attempted suicide and died by suicide were summed for each mental health issue measured.

Life interference of mental health - Participants rated on a scale of 1-5 (1= not at all and 5= very much) how much depression, anxiety or stress had interfered with their education, employment, relationships with friends, relationships with family, relationships with the ex-partner, hobbies, interests and related activities and other aspects of their life. For those with a rating of 3 or above, they were given a score of 1. If they rated the interference below 3 they were given a 0. These scores were then summed to indicate how affected their lives have been by mental health difficulties. The higher the number, the higher the life interference.

Suicidal ideation - Participants who responded 'yes' to any of the following questions "Since the separation have you thought about killing yourself?", "Since the separation have you had a plan to kill yourself" and "Since the separation have you attempted to kill yourself" were coded 1 for each question. Participants who responded 'no' were coded 0. These three variables were used separately in some analyses. However, a continuous score of suicidal ideation was compiled in order to indicate the severity of suicidal ideation. Those who responded 'no' to all of the above questions had no suicidal ideation and were coded 0. Those who responded 'yes' to any of the questions were coded as a 1 for that question. The scores were then summed to create a continuous score that ranged from 0-3. The higher the score the more severe the suicidal ideation.

Post-separation support.

Emotional support - Participants were asked to rate on a scale of 1-5 (where 1= none and 5= a tremendous amount) how much emotional support they were receiving from friends/family.

Practical support - Participants were asked to rate on a scale of 1-5 (where 1= none and 5= a tremendous amount) how much practical support they were receiving from friends/family.

Other support since separation - If participants indicated that they had sought some other type of help aside from that of family and friends they were coded 1, if they had not, they were coded 0. They were asked to specify the type of support they sought.

Attendance at Parenting Through Separation course- If participants had attended the Parenting Through Separation course they were coded 1, all others were coded 0.

Attendance at Family Court - If participants had been involved the Family Court in order to resolve day-to-day care issues they were coded 1, all others were coded 0.

Time spent with a supportive friend/family member -The amount of time spent with a supportive friend or family member per week, in hours, was recorded.

Thoughts about seeking help - Participants were asked if they had sought help after their separation. If they had not sought any help, they were asked if they had had any of the following thoughts: "Did not need help could handle it yourself"; "Thought the problem would get better on its own"; "Did not think to seek help"; "Embarrassed to seek help"; "Did not know where to go" ; "Didn't think anything would help"; "Couldn't afford help"; "Afraid of what others might think"; "Didn't want to appear as having mental health problems"; "Afraid you would be put in hospital"; "Tried to find help but couldn't"; "None of the above"; "Not applicable". The participants could choose as many as they liked. If they chose an item they were coded 1 for that item. If the item was not chosen, it was coded 0.

Who did you consult for advice - If participants had indicated that they had sought help, they were asked who they consulted from the following list: General practitioner, Psychiatrist, Psychologist, Counsellor. The participants could choose as many as they liked. If they chose an item they were coded 1 for that item. If the item was not chosen, it was coded 0.

How helpful was the treatment offered - If participants indicated that they had sought help, they rated on a scale of 1-5 how helpful the treatment was (where 1= Not at all helpful, and 5 = Extremely helpful).

Post-separation parenting.

Day-to-day care plans - If the participant had full-time care of children they were coded 3; if they shared day-to-day care, they were coded 2; if their partner had full time care they were coded 1; if they do not see their children at all, they were coded 0. Other arrangements were computed to another variable where 1 represented another type of arrangement and 0 represented no other type of arrangement (these included arrangements such as one child each or boys with the father, girls with the mother).

Time spent with children - If participants spent more time with their children after the separation than before the separation, they were coded 3; if they spent about the same time with their children since the separation, they were coded 2; and if they spent less time with their children since the separation, they were coded 1.

Relationship with children - If participants felt that the relationship with their children had improved since the separation, they were coded 3; if they thought that the relationship was about the same, they were coded 2; and if the participant thought that the relationship had deteriorated since the separation, they were coded 1.

Conflict with ex-partner - If the participant indicated they had experienced difficulties with their ex-partner over co-parenting issues (they could choose from the following: transitions from one parent to another, finances, parenting plan, rules and routines, schooling, health decisions and information), they were coded 1 for each item. If they had not experienced conflict over an issue, they were coded 0. These scores were then summed to develop a score for the level of conflict between them and their ex-partner.

Ease of reaching day-to-day care plan with ex-partner -Participants rated on a scale of 1-5 how easy it was to establish day-to-day care plans for the children with their ex-partner (where 1= not at all easy and 5= extremely easy).

Appendix G

Additional Results from Study 1

Non significant differences between males and females on important relationship variables. Males and females did not differ significantly on how satisfied in the relationship they were (Male Mean (*M)*=3.10, Standard Deviation (*SD)*=1.24, Female *M*=2.82 *SD*=1.20); their level of forgiveness (Male *M*= 3.32 *SD*= 0.87, Female *M*= 3.29 *SD*=0.80); how much they wanted the separation (Male *M*=3.13 *SD*=1.57, Female *M*=3.26 *SD*=1.52); how many times they had previously separated with their ex-partner (Male *M*=2.05 *SD*=3.05, Female *M*=2.16 *SD*=1.90); whether they thought the separation was a positive change for the short and long term (Male *M*=0.63 *SD*=0.49, Female *M*=0.72 *SD*=0.45; Male *M*=0.93 *SD*=0.25, Female *M*=0.93 *SD*=0.26, respectively); and whether they are in a new relationship (Male *M*=0.33 *SD*=0.48, Female *M*=0.18 *SD*=0.39). Just over half (55.4%) of the participants had only separated from their ex-partner once, one fifth (22.3%) had separated twice, ten percent of the sample had separated 3 times and the remainder (12.3%) had separated four or more times. There were no sex differences between the number of times they had separated before their final separation.

Support and treatment. Both males and females in this study indicated that on average they received "Quite a lot" of emotional support (Male *M*=3.93, *SD*=1.02; Female *M*=3.85, *SD*=1.12). Males and females also indicated that on average they were receiving "Some" practical support (Male *M*=2.80, *SD*=1.35; Female *M*=3.07, *SD*=1.26). There were no significant differences between males and females on the level of support they were receiving.

Table 29 ***Descriptive Information on Additional Mental Health Variables from Study 1 (N=112)***		
How much time would you spend with a supportive friend/family member per week in hours?	0-5 hours 6-10 hours 10+ hours	53.6 % 25.1% 21.4%
Have you had any other type of support?	Yes	58.1%
If you did not consult a doctor did you have any of the following thoughts.	Did not need help could handle it yourself: Thought the problem would get better on its own: Did not think to seek help: Embarrassed to seek help: Did not know where to go: Didn't think anything would help: Couldn't afford help: Afraid of what others might think: Didn't want to appear as having mental health issues: Afraid you would be put in hospital: Tried to find help but couldn't: None of the above: Not applicable:	27.7% 21.4% 5.4% 11.6% 9.8% 14.3% 23.2% 8.0% 12.5% 4.5% 5.4% 0.9% 52.7%
Whom did you consult for advice, counselling or treatment for these problems?	GP Psychiatrist Psychologist Counsellor NA	44.6% 8.9% 18.8% 53.6% 23.2%
How helpful was the treatment offered to you? (*n*=85)	Not at all helpful Not very helpful Somewhat helpful Quite helpful Extremely helpful	4.7% 7.1% 21.2% 35.3% 31.8%

Table 29 provides descriptive information on the support and treatment received by the sample in Study 1. Fifty percent of the sample received 0-5 hours support a week, 25% of the sample received 6-10 hours and about 20% of the sample received more than 10 hours support a week from friends and family. More than half of the sample received other type of help outside of friends and family which included counselling, psychologists/doctors, New Zealand Family Court and church help. Of those people who did seek treatment, it tended to be from a General Practitioner or a counsellor. Two thirds of those who sought treatment found it helpful. Of those who did not receive treatment, almost one third stated that they did not seek treatment as they thought they could handle it themselves. Finally, one fifth did not receive treatment because they thought the issues would get better on their own, and almost one quarter did not seek treatment because they did not think they could afford it.