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Factors associated with relationship dissolution of Australian families with children

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Executive summary

Previous research funded through the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) Social Policy and Research Services (SPRS) program has examined family and relationship transitions in Australia. Research seeking to identify the factors associated with marital instability provides an important basis for policy development and service delivery, such as the design and development of appropriate interventions and better targeting of at-risk couples (Hewitt, Baxter & Western 2005; Wolcott & Hughes 1999). This project was conducted in 2005 to investigate the context in which relationship instability occurs, by examining the factors (at the individual, and the couple/family levels) that precede relationship dissolution within Australian families with children. This project seeks to complement the previous research conducted for FaHCSIA, focusing on our areas of expertise such as psychological and physical health and wellbeing.

Previous research has shown that marital instability is associated with factors such as relationship and sexual dissatisfaction, presence of stepchildren, parental divorce, cohabitation prior to marriage, pregnancy prior to marriage, younger age at marriage, the consistency of attitudes between partners, financial and socioeconomic circumstances, educational attainment, negative interactions/behaviour between spouses (such as avoidance, negative reciprocity, and so on), wife's employment, receipt of welfare payments, negative effect or depression, an unhappy childhood, duration of marriage and religiosity (for example, Bradbury & Norris 2005a; Hewitt, Baxter & Western 2005; Karney & Bradbury 1995; Wilson & Waddoups 2002).

A major innovation in this study is our focus on health and health behaviours (though consider research by Bradbury & Norris 1995b, who also looked at health and marital instability). We consider whether mental health problems, impaired physical functioning, hazardous levels of alcohol consumption and smoking are associated with later divorce or separation. The positive association between marriage and health may be attributed to marriage being a deterrent to negative health behaviours and providing an environment supportive of positive behaviours (Umberson 1987). It may also be that an association between health and marital instability reflects processes of social selection or social causation (Amato 2000).

The analysis in this paper is also unique in that it considers data from both spouses. We analyse data from the Household, Income and Labour Dynamics in Australia (HILDA) survey and take advantage of the household sampling frame that collects data from multiple household members. This enables assessment of the circumstances of both partners, and an investigation of whether consistency (homogamy) or disparity of characteristics is associated with relationship instability.

Data are from the HILDA survey (release 3.0), a nationally representative household panel survey. The project uses longitudinal data from three waves to investigate the characteristics of couples that separate. The analysis is limited to adult respondents with dependent children, considering couples in both marriage and de facto (common law) relationships. Overall, 1,498 mixed-sex couples were considered, having data available for both spouses and sufficient information across subsequent waves to ascertain if the couples remained together or separated. Having identified intact couples with dependent children at Wave 1, we contrast the initial circumstances of those who remain together with those who separate or divorce. Of the 1,498 couples: 1,384 (92.4 per cent) were classified as intact couples over the three waves of data and 114 (7.6 per cent) had separated.

The analysis confirmed the association between many of the previously mentioned characteristics and marital instability using an Australian sample. At the couple level, simple univariate analysis showed marital stability was associated with physical health, mental health, smoking behaviour, relationship dissatisfaction, life dissatisfaction, receipt of income support, labour force status, financial hardship, educational attainment, religiosity, previous marriage-like relationships, parental divorce, cohabitation prior to marriage, being in a de facto relationship, and short relationship duration. The analysis also found that there was significant spousal concordance or similarity for these characteristics, demonstrating the importance of considering how the characteristics of spouses may combine to influence relationship stability.

Through a series of stepped analyses, we built a model which incorporated important characteristics from a range of different domains and identified a number of significant effects. Couples in which women reported dissatisfaction with their relationship had a much higher risk of subsequent divorce or separation. The effect of women's dissatisfaction subsumed the effect of men's relationship dissatisfaction. De facto couples had a greater risk of separation than married couples, consistent with the existing literature (Bradbury & Norris 2005b). Similarly, parental divorce remained a strong predictor of subsequent own divorce/separation (Amato 2000).

The analysis of health and health behaviours was a focus of this project. While there was no association between alcohol consumption and relationship instability, and the effect of physical functioning was not apparent in the multivariate model, mental health (and life satisfaction which we also considered an alternative measure of the same general construct) was associated with separation/divorce, though the effects were significantly attenuated in the full model. The final analysis suggested that the effects of men's poor mental health and women's dissatisfaction with life were mediated through relationship satisfaction. Across all of the analyses, there was a strong relationship between smoking status and marital instability. There has been little consideration of this effect in the literature. The final multivariate model showed that couples in which women were smokers (regardless of the male partner's smoking status) were at increased risk of divorce or separation. We consider that this reflects the effectiveness of women's smoking as a marker of social and economic disadvantage and adversity.

Finally, we also found a very strong effect of educational disparity on marital instability. Compared to couples in which partners had similar levels of educational qualifications, those couples in which women reported tertiary qualifications and men reported not completing high school had a ten-fold greater risk of divorce/separation. This may reflect two factors. Firstly, women's educational attainment may be a proxy for financial independence and, thus, the opportunity for women to support themselves outside of the marriage. This removes a potential barrier to divorce or separation. Secondly, these couples may experience greater conflict or dissatisfaction within the relationship, perhaps associated with the fact that they are not fulfilling the traditional gendered roles within marriage. Couples showing the opposite pattern of educational attainment (men with tertiary qualifications and women not completing high school) did not demonstrate an increased risk of subsequent marital instability and, if anything, showed somewhat greater than average stability.

In summary, the project demonstrated the need to look beyond financial circumstances and employment characteristics when considering factors associated with marital stability. These results demonstrate the nexus between social policy, public health and health policy.

1   Introduction

1.1   Background, objectives and policy relevance

Previous research funded through the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) Social Policy and Research Services (SPRS) program has examined family and relationship transitions in Australia. Gregory and Klug (2003), for example, showed how relationship transitions (and the corresponding movement between different income support payment types) mask the long-term welfare dependency of parenting payment recipients. Bradbury and Norris (2005a) examined the socioeconomic correlates of relationship instability, including income and receipt of income support payments. The aim of the current project is to build on this previous research and examine factors associated with relationship dissolution.

According to recent statistics, 7.4 per cent of the Australian population aged 15 and over are currently divorced. This figure represents a substantial increase from 1976 when just over 2 per cent of the population were divorced (de Vaus 2004). Considering the cohort born in 2000, it is estimated that 32 per cent of their marriages will end in divorce (ABS 2001). Official divorce statistics underrepresent relationship dissolution. Firstly, these figures do not include marriages that end in permanent separation but not divorce (Hewitt, Baxter & Western 2005). Secondly, they do not consider dissolution of cohabiting or de facto couples (an increasingly common form of partnering in Australia). In 2001, 12.4 per cent of couples were in cohabiting relationships, and cohabiting relationships are known to be, on average, less stable and more likely to end in separation than marriages (de Vaus 2004). Relationship instability is also an issue with much relevance to the study of child wellbeing. In 2001, 51 per cent of divorces involved children under the age of 18 (de Vaus 2004). This is reflected in the changing demographic characteristics of Australian families. One-parent families with dependent children (usually lone mother families) comprise 21.8 per cent of families with dependent children. Data from the HILDA survey shows that 26.8 per cent of children born between 1976 and 1983 spent some time in a lone-mother family before reaching the age of 18 (de Vaus & Grey 2003, 2004).

Research and policy interest in separation and divorce is driven by a number of factors. For example, policy and research interest in the topic of marital stability is prompted by the strong and well-established association between marital status and physical and mental health, mortality, personal wellbeing, and personal wealth (Joung et al. 1998; Wilson & Waddoups 2002; Wolcott & Hughes 1999). On average, married people are much better off than those who are not married. There is also evidence that outcomes for children from intact families are better than for children who experience divorce/separation (Amato 2000). Receipt of income support or welfare payments is also intertwined with relationship instability given the nature of the eligibility criteria and the socioeconomic correlates and consequences of divorce. Finally, Australian adults report a positive and optimistic view of marriage. According to survey data reported by de Vaus (2004), a considerable majority of people believe that marriage should be for life, that people entering marriage should not consider the possibility of divorce, and that people marrying should intend it to be permanent. Therefore, research and policy seeking to understand ways to increase relationship stability is aligned with public/community views about the importance of marriage.

There are, therefore, many reasons to undertake research seeking to understand how to prevent divorce and strengthen families. Research seeking to understand the factors that lead to marital instability provides an important basis for policy development and service delivery, such as the design and development of appropriate interventions and better targeting of at-risk couples (Hewitt, Baxter & Western 2005; Wolcott & Hughes 1999). There is, however, a need to be mindful of the broader context in which such research takes place and in which it will be interpreted: that is, awareness of conflicting philosophical views (Amato 2000). Some view two-parent families as the basis of society and believe that the increase in single-parent families has contributed to societal problems. The contrasting perspective is that personal fulfilment and development can occur in a variety of family types and that the need for some adults and children to escape from a dysfunctional and harmful environment is even more critical than family type.

1.2 Research questions and general strategy

At the end of their investigation into the welfare dependency of lone-parent families, Gregory and Klug (2003) pose the question of why is there so much relationship instability within the income support system. The current project seeks to investigate the context in which this relationship instability occurs and examine the factors (at the individual, and the couple/family levels) that are associated with relationship dissolution within Australian families with children.

We analyse data from the Household, Income and Labour Dynamics in Australia (HILDA) survey and take advantage of the household sampling frame that collects data from multiple household members. This enables assessment of the circumstances of both partners, and investigation of whether consistency or disparity of these characteristics is associated with relationship instability. The project utilises longitudinal data across three waves to undertake a prospective study of couples that separate. The analysis is limited to adult respondents with dependent children and considers couples in both marriage and de facto (common law) relationships.

The primary focus of this report is on couples that separate. Having identified intact couples with dependent children at Wave 1, we contrast the initial circumstances of those who remain together through to Wave 3 with those who separate/divorce.

Unlike the previous SPRS studies, income support receipt (and measures of income and financial circumstances) are not the primary focus of the current analysis, but are simply one of a number of characteristics that are examined. This project seeks to complement the previous research conducted for FaHCSIA by focusing on areas of expertise within the Family and Community Health Unit, such as psychological and physical health and wellbeing.

1.3 Summary

The aim of the current project is to identify the personal factors associated with relationship dissolution and partnering among Australian families to assist in the design and targeting of family, children's and welfare policies.

2 Framework for the project

There are a number of ways to conceptualise the correlates of relationship dissolution, a variety of theoretical frameworks and a number of other important notions that need to be considered. This section will discuss these issues as background information prior to a brief review of previous findings and the presentation of the current results.

2.1 General considerations

An important starting point is to consider the potentially different mechanisms that may explain the differences in health and wellbeing that are associated with marital status. There is a general agreement about two broad processes for health differences between groups: social selection and social causation (Amato 2000; Hope, Rodgers & Power 1999; Wade & Pevalin 2004). When considering transitions both into and out of marriage, it is possible to identify four different mechanisms (after Wilson & Waddoups 2002):

◗ Those with certain (positive) traits or characteristics are more likely to marry (selected into marriage).

◗ Marriage has positive effects (social causation).

◗ Certain (negative) traits or characteristics lead to marital dissolution (selection out of marriage).

◗ Marital dissolution has a negative impact (social causation).

These explanations are not mutually exclusive as, for example, there is evidence for both social selection and social causation as explanations of elevated psychological distress among those experiencing marital disruption (Amato 2000; Hope, Rodgers & Power 1999; Wade & Pevalin 2004). The differences have broader relevance than just health, and may apply to many different characteristics that precede or change during the course of the marriage/relationships.

A complicating issue when trying to differentiate between explanations of selection and causation relates to the timing of both measurement and the expected effects. The timing of legal divorce lags actual relationship dissolution and, similarly, separation is likely to follow a period characterised by marital dissatisfaction, conflict and negative interpersonal interactions (Wade & Pevalin 2004). Thus, characteristics observed prior to the actual date of separation and/or divorce may not necessarily be causal factors or even precede the onset of marital difficulties, but could represent the adverse consequences of the process of separation. For instance, Wade and Pevalin (2004) found anticipatory psychological distress at least two years prior to separation/divorce (see also Hope, Rodgers & Power 1999).

As in all social research, there is a need to be mindful of the distinction between correlations, and direct and indirect effects when interpreting results. An association between a particular characteristic (for example, parental divorce) and marital disruption does not necessarily indicate a causal link. The relationship could simply reflect the clustering of characteristics (both observed and unobserved), such that the variable being examined is a marker of another characteristic that is causally related to marital instability. For example, the relationship between experience of parental divorce and one's own relationship instability may simply be a consequence of general societal changes and cohort differences which make both parental divorce and own relationship instability much more common among younger people. Alternatively, the relationship observed between a particular characteristic and marital instability may be mediated (have its effect) through other variables (such as the effect of parental divorce being mediated through one's attitude towards marriage). To disentangle these effects, research:

◗ needs to move away from cross-sectional correlational studies

◗ must consider both simple and multivariate analyses

◗ must undertake more sophisticated statistical modelling (see Karney & Bradbury 1995).

With a focus on policy relevance, research needs to consider the factors associated with marital/relationship disruption at both the macro and micro levels, and the interaction between factors at different levels, to ascertain the drivers of instability and leverage points for interventions both within and outside of the marriage. An appropriate intervention could be any systematic attempt to address underlying causes of relationship instability, whether through the provision of individual counselling or relationship therapy, or macro-economic or welfare reforms designed to reduce pressures on families that may be a catalyst for relationship instability. Butterworth and Berry (2004) demonstrated the application of such a framework to identify the range of options and relevant stakeholders in the context of promoting employment opportunities for welfare recipients with mental health problems.

Finally, there are a variety of different outcome measures used in the existing literature, and different ways of measuring the same construct. For example, a number of the theories that will be discussed later consider the association between marital quality/satisfaction and marital disruption (Karney & Bradbury 1995). While there is a moderate relationship between these variables, marital dissatisfaction does not perfectly predict disruption and other factors are needed to enable accurate prediction. Karney and Bradbury identified over 30 measures of marital satisfaction or marital quality in their 1995 review. These included measures based on self-report, consistency of partner's reports, multi-dimensional multi-item scales, or single item scales. Similarly, relationship instability can be defined as legal divorce, separation (which may not be permanent), or based on reports that couples have considered divorce. Relationship instability can be defined to only include the dissolution of legal marriages or may also consider the separation of couples previously in de facto relationships.

Within the disciplines of sociology and demography there is much more of a focus on relationship duration (using techniques such as survival analysis; for example, Hewitt, Baxter & Western 2005). Other sophisticated approaches, such as considering intra-couple variability, structural equation modelling, or latent growth models (examining the dynamic nature of marital satisfaction across relationship duration) are very rare within the literature. Decisions made about the measurement and definition of constructs and analytic techniques have implications for the results, interpretation and comparability of studies. In this analysis, we focus on the separation of couples with dependent children in either marriage or de facto relationships (for a similar approach, see Bradbury & Norris 2005a, 2005b; Ostermann, Sloan & Taylor 2005). We use the terms 'instability', 'disruption', 'separation' or 'dissolution' interchangeably to reference the same concept. Similarly, in general discussion we use the term 'marital disruption', while strictly speaking we are considering the dissolution of both marriage and de facto relationships.

2.2 Broad explanations and categories of predictors

A wide variety of variables have been examined as potential predictors or correlates of marital disruption. Amato and Previti (2003) differentiated between sociological (such as broader structural and life course factors) and psychological factors (including interpersonal interactions, conflict management, and personal characteristics such as negative affect). In a similar way, Wolcott and Hughes (1999) drew a distinction between demographic/life course factors (including early age of marriage, cohabitation prior to marriage, pre-marital pregnancy, educational attainment, income, experience of parental divorce) and factors associated with personal preparation or competency to fulfil a marital role and/or to resolve conflict within the marriage (poor communication skills, incompatibility, infidelity, mental health problems, role conflict, personality). In their analysis of Wave 1 HILDA survey data, Hewitt, Baxter and Western (2005) categorised social correlates of marital dissolution under four general headings:

◗   temporal factors (cohort, age, relationship duration)

◗   life course (family background, relationship history)

◗   attitudinal (for example, gender roles, religious beliefs)

◗   socioeconomic factors.

Given the extensive literature and claims about the health effects of marriage, it is surprising that there is little research examining health and health behaviours as possible determinants of marital dissatisfaction and marital disruption (Fu & Goldman 2000; Joung et al. 1998; Wilson & Waddoups 2002). This represents a key aspect of our current analysis. The inclusion of measures of health is not only relevant to the personal or psychological approach of studying marital dissolution, but is also relevant for sociological or demographic analysis (supporting the identification of trends associated with population changes over time). In their study, Fu and Goldman (2000) used a broad conceptualisation of health to enable the identification of indirect associations between health and marital instability (such as through smoking behaviour and alcohol consumption). We adopt a similar approach.

2.3 Theories of marital disruption

The rise in the divorce rate corresponds with many social and cultural changes. The context in which we examine the drivers of marital instability can be characterised by:

◗ greater choice (in all domains of life including relationships, family formation, and career)

◗ increasing expectations from marriage

◗ greater social acceptance of divorce

◗ the greater economic independence of women and declining earnings of men with low levels of educational attainment

◗ the availability of social welfare

◗ (possibly) a greater range of stresses impacting on families (Amato 2000; Wolcott & Hughes 1999).

A significant limitation of the research area that many researchers have commented on is the lack of adequate theoretical models to guide research (for example Wilson & Waddoups 2002). Although there is a considerable body of research, much of it is atheoretical and has assessed direct effects, rather than considering mediating or intervening variables. Karney and Bradbury (1995) discuss how the lack of a unifying theoretical basis prevents the development of specific and testable hypotheses, and makes it difficult to refine or build on previous research findings. In fact, given that the body of research crosses several disciplines, the lack of an organising theoretical framework makes it doubly difficult to integrate research data into a coherent knowledge base and to understand the nature of the relationship between different predictors (that is, moving beyond single risk-factor studies). Developing an understanding of why and how marriages succeed or fail requires us to integrate the empirical data that are available.

A number of theories incorporate broad economic or social psychology principles to posit marital dissolution as a process of rational choice, an analysis of costs and benefits, or bartering. Similar to marriage-market models of relationship formation (Becker 1973, 1974), these theories suggest that marital dissolution involves decisions about whether the utility derived from remaining married is greater than the utility anticipated from divorcing and possibly remarrying (Becker, Landes & Michael 1977; Fu & Goldman 2000). Levinger's social exchange theory (Levinger 1965, 1976) explicitly identifies the role of factors both within and external to marriage. Marital success or failure is based on the couple evaluating and balancing the attractions provided by the relationship, the barriers to leaving the relationship (including external factors such as social norms) and the presence of attractive alternatives outside of the relationship. Importantly, this model posits that marital satisfaction and marital stability may, in some circumstances, be unrelated dimensions. Unsatisfying marriages may remain intact in the absence of alternatives and/or the presence of significant barriers to leaving the relationship.

Karney and Bradbury (1995) identify three other significant theoretical perspectives that have influenced research and thinking on marital instability. **Behavioural theory** (Bradbury & Fincham 1992; Gottman 1979) is an approach that focuses on the interdependency between spouses, evaluating the interpersonal exchange of

behaviours and attributions made when interpreting spouses' behaviour. The model is based on the view that one's cognitive responses affect marriage through their influence on subsequent interactions and, as such, is a dynamic model. The behavioural model includes only limited consideration of the influence of external factors. In contrast, **attachment theory,** based on the research of Bowlby (1969) with infants and extended by Hazan and Shaver (1987) to adult relationships, identifies consistent and enduring relationship styles that influence marital quality and stability. While this model captures the influence of enduring vulnerabilities, it lacks a dynamic element to model change within and between couples over time. Finally, Karney and Bradbury identify **crisis theory** as another key theoretical perspective on marital instability (Burr 1982; McCubbin & Patterson 1982). This model focuses on the effect of external events on the processes within and between spouses. It considers how couples adapt to external events based on the resources available and how they define/perceive the event.

According to Karney and Bradbury, the three criteria by which the adequacy of theoretical models in the area should be evaluated are whether they:

◗ incorporate a full range of possible predictors of marital outcomes and provide links between different levels of analysis

◗ specify mechanisms of change within marriage

◗ account for variability in marital outcomes between couples and within couples over time.

They developed a **vulnerability–stress–adaptation** model of marriage that incorporated aspects of each of the models discussed above into a unified framework to model:

◗ change and interactions

◗ the role of external events and adaptation

◗ the influence of stable characteristics and prior experience

◗ dynamic interactions between different aspects.

This discussion of theoretical models highlights the broad range of variables considered in the research literature and the variety of models required to understand the causes of relationship instability.

It is also important to recognise that, at the level of individual risk factors and individual studies, there are a variety of explanations/theories used to explain the effects of each of the correlates of marital instability. For example, de Vaus, Qu and Weston (2003) discussed three explanations for the robust and somewhat counterintuitive findings of less stability among couples that cohabit prior to marriage. These explanations include selection effects, with couples who choose to cohabit being different in other important ways from couples who have a 'direct' marriage. This may involve having more unconventional backgrounds, or attitudes or values that are associated with reduced marital stability. Secondly, the experience of cohabitation may change the couples' attitudes or behaviours in a way that decreases the stability of their marriage. Finally, it may be that apparent greater relationship instability is simply a measurement artefact, and that differences are not evident if one considers overall relationship length (combining length of marriage and prior cohabitation) when comparing the relative stability of direct and indirect marriages.

2.4   Considering both members of the couple

Another theme in the literature is the need to consider data from both members of a couple and examine the joint effects of characteristics, traits and behaviours on relationship stability (Ostermann, Sloan & Taylor 2005). The psychological/behavioural research is explicitly concerned with the interaction between partners. However, in other domains there is less focus on how the characteristics of each member of a couple are related to marital instability, particularly in survey research in which data is often only available from a single member of the couple. There is also ambiguity about the types of predictions one would make concerning the combination of partners' characteristics.

At the simplest level, the separate consideration of men's and women's characteristics and how they relate to marital instability enables investigation of gender-specific effects (that is, whether the association between a characteristic and relationship instability differs by gender). There is some limited evidence, for example, that men's employment and level of income is related to marital instability, whereas for women these characteristics are not as strongly related to marital instability (Karney & Bradbury 1995).

A somewhat more sophisticated level of analysis involves considering spouse similarity for particular characteristics. For example, theories of homogamy predict that relationship stability is tied to the consistency or similarity between partners. In contrast, heterogamy within couples is considered a source of conflict, dissonance and power imbalance, and, therefore, associated with greater relationship instability (Becker, Landes & Michael 1977; Bumpass, Martin & Sweet 1991; Karney & Bradbury 1995). Consistent with this, retrospective reports by individuals post-separation show that incompatibility is perceived to be one of the major causes of divorce (Amato & Previti 2003; Wolcott & Hughes 1999).

The question of why spouses are more similar than would be expected by chance has been examined in a number of research fields and for a variety of observable and latent characteristics. Research has shown:

◗ strong correlations between spouses in age, political and religious attitudes

◗ moderate correlations in educational achievement, intelligence, cognitive ability and physical characteristics (height, BMI, attractiveness, health, diseases and chronic conditions, mental health, substance use disorders)

◗ relatively low or weak correlations between spouses for personality traits and temperament.

(See, for example: Dubuis-Stadelmann et al. 2001; Galbaud du Fort, Kovess & Boivin 1994; Hippisley-Cox et al. 2002; Silventoinen et al. 2003; Thiessen, Young & Delgado 1997; Wilson 2002.)

There are a number of explanations of why spouses may be similar. Initial similarity may be due to direct or primary assortative mating (Galbaud du Fort, Kovess & Boivin 1994; McLeod 1995) with partner selection on the basis of the characteristics under investigation. It may be a secondary consequence of selection for other characteristics which themselves are associated with the characteristics in question. Alternatively, similarity may be a consequence of social stratification in that the cultural, social and geographic structures that constrain partner selection also explain the similarity evident in a range of characteristics.

Others disagree with the notion that heterogamy is associated with relationship instability. According to such views, the characteristics present at the time of marriage form part of the decision to marry. Therefore, any mismatch of characteristics should have little impact on later divorce as these pre-existing characteristics have already been traded in the marriage market with decisions made on the basis of the relative attractiveness of each partner (Wilson & Waddoups 2002). Accordingly, the effect of partner mismatch on marital stability may be considered more a consequence of the inadequacy of the initial matching process. Marital stability is, therefore, associated with marital search and the adequacy of mate selection, pointing to the need to consider courtship and relationship origins within research into relationship instability (Becker, Landes & Michael 1977; Ostermann, Sloan & Taylor 2005; Zimmer 2001). An exception would be where the characteristics were not obvious and not recognised at the time of marriage and, according to the theorists, such circumstances should be associated with early separation (Wilson & Waddoups 2002).

Alternatively, analysis may focus on the effect of change within the relationship. A change in a partner's characteristics could alter the balance of attractions and barriers that were negotiated when establishing the relationship. However, changes in both members of a couple (for example, declining health with ageing) may not alter relationship stability, as changes to both self and partner influence both attractions and barriers (Wilson & Waddoups 2002). While the dynamic nature of the relationship may be a critical consideration, it has not been studied in depth.

Thus far, our discussion of couple data has been limited to the effects of consistency or discrepancy. In their review, Karney and Bradbury (1995) suggest that the effects of discrepancy are generally explained when

controlling for the initial levels (or main effects) of the variables. It is possible, however, that in the process of partner selection, characteristics associated with marital instability are also matched. It is unclear what the effect of the combination of such risk factors within the relationship may be. An example is found with mental health problems, which are known to be similar between partners (Butterworth & Rodgers 2006) and also to be associated with marital instability (Hope, Rodgers & Power 1999). Is there a threshold effect? (In other words, does the mere presence of the risk factor—mental illness—increase the risk of divorce regardless of whether it is experienced by one or by both partners?) Is the effect additive (do couples where both partners report mental health problems have twice the risk of instability as couples in which only one partner has a mental health problem)? Is there an interactive effect (are couples in which both partners report mental health problems at a greater or lesser risk of relationship instability than would be expected based on the two main effects)? Data from Merikangas (1984) were interpreted as supportive of the latter explanation, showing that couples in which both partners have a clinical psychiatric disorder had a much greater rate of divorce.

There is a need to also recognise that in some instances partner selection and relationship stability may not be based on consistency but on the complementary nature of spouse characteristics (Ostermann, Sloan & Taylor 2005). From a health perspective, the presence of two initially healthy spouses provides redundancy in the relationship. In the event of illness to one partner, the well spouse can provide support and the inputs required within the household (Merikangas 1984). Thus, such consistently healthy couples have a practical advantage over couples with initially disparate health characteristics. The similarity between spouses may not reflect initial matching, but may be a consequence of the influence of common lifestyle risk factors occurring after marriage (such as the adverse health effects of smoking), the effect of shared environmental exposures (same food, same pollution) or could be a direct effect of the ill health of one spouse upon the previously healthy spouse, such as through contagion, the burden of care, or stress (psychologically and financially) from fulfilling the roles normally attributed to two persons (Galbaud du Fort, Kovess & Boivin 1994; McLeod 1995).

Thus, the ways in which the characteristics of each member of a couple combine to effect relationship instability is an important issue, though the exact nature of the effect is uncertain and is likely to differ for different characteristics.

3   Previous research findings

In this section we provide an overview of the existing literature as a basis for understanding the current study.

3.1   Methods used in the literature

Despite repeated claims in the literature of a lack of longitudinal research in the area, and calls for further longitudinal evidence examining marital instability, Karney and Bradbury identified 115 international longitudinal studies in their review of the literature in 1995. Many more longitudinal studies have been conducted subsequent to their review.

A more significant limitation in the previous literature is the inadequacy of the analytical methods used. In their review, Karney and Bradbury noted that the majority of studies use simple (and often inappropriate) statistical techniques to analysis longitudinal data, including simple correlations or t-tests/analysis of variance. The benefit of having longitudinal data is the ability to take account of time, process and change and to move beyond cross-sectional analysis (Wilson & Waddoups 2002). Our analysis, following the methods of Wilson and Waddoups and many others, uses a relatively modest prospective approach of examining the extent to which baseline characteristics predict subsequent marital dissolution. In addition, we also consider the separate and interacting characteristics of spouses. This somewhat limited approach is necessary given the timeframe of the study (only three waves of data provide limited opportunity to model change over time). As such, we do not employ a dynamic model assessing the effect of change. It is also important to recognise limitations in the types of characteristics we can examine. Some of the measures examined in the literature are drawn from different types of studies, such as observational studies (particularly relevant to the psychological literature examining patterns of spousal interactions and behaviours) and studies in which people who have divorced report retrospectively on the reasons for relationship dissolution. As a result of our use of longitudinal survey data, certain topics are outside the scope of the project.

3.2   Research findings

Hewitt, Baxter and Western (2005) noted that there is only limited Australian research examining marriage dissolution, and that the existing literature is largely concerned with demographic characteristics. Nonetheless, there is a considerable body of international research relevant to our study. Local research may be particularly important when seeking to understand the finer detail of the policy context and the role of specific local cultural factors (that is, greater levels of cohabitation in Australia than in the United States). Given that this project is relatively broad in its scope, this is not considered to be critical.

A range of macro-level factors that may be associated with the increase in divorce have been identified in the literature including: changes to the legal process of divorce, the economic cycle, the changing importance of the family unit, gender roles, and changing cultural norms (Wilson & Waddoups 2002; Wolcott & Hughes 1999). At the micro-level, Wilson and Waddoups (2002) noted that the presence of stepchildren, parental divorce, cohabitation prior to marriage, pregnancy prior to marriage, younger age at marriage, and younger age overall are characteristics associated with greater marital instability. In contrast, the presence of children within the home is associated with increased marital stability. In their overview of the literature, Karney and Bradbury (1995) made similar observations. They reported that the factors associated with marital stability include relationship and sexual satisfaction, consistency of attitudes between partners, older age at marriage, higher income (but only husband or overall family income), and level of educational attainment. Karney and Bradbury also noted that the characteristics of couples in unstable relationships include reported parental divorce, negative interactions/behaviour between spouses (such as avoidance, negative reciprocity, and so on), premarital pregnancy, wife's employment, receipt of welfare payments, negative affect or depression, an unhappy childhood, and premarital cohabitation.

Our discussion began with reference to the research of Gregory and Klug (2003), which demonstrated relationship instability among welfare recipients. Bradbury and Norris (2005b) focused on the role of financial and socioeconomic correlates of marital instability, examining welfare receipt and household income. Using the HILDA survey data and FaHCSIA's Longitudinal Data Set (LDS), they found an income gradient in rates of separation. These effects were only partially explained by demographic characteristics (such as marital status, education, number of children) and health and attitudinal variables. Thus, financial circumstances exert an effect on relationship instability over and above that mediated through (physical and mental) health and relationship satisfaction.

Hewitt, Baxter and Western (2005) examined factors associated with marital instability using Wave 1 data from the HILDA survey. Their retrospective analysis showed that rates of marital disruption increase and peak in the first five years of marriage, and then decline at a decreasing rate. The respondents identified as divorced or separated were differentiated from those who were married by birth cohort (earlier cohorts had lower risk of marital disruption than more recent birth cohorts), experience of parental divorce, cohabitation prior to marriage, and having a child prior to marriage. Marital stability was associated with the birth of a child within marriage, older age at marriage and religiosity (reporting that religion was important in their life). For men, higher levels of educational attainment were associated with greater marital stability. For women, however, those with tertiary qualifications had greater marital instability. In addition, women born overseas in an English-speaking country had an increased risk of marital instability.

Our focus on health and health behaviours is unusual, particularly in Australian research on marital instability (though consider Bradbury & Norris 1995b). The positive association between marriage and health is, in part, attributed to marriage being seen as a deterrent to negative health behaviours and providing an environment supportive of positive behaviours (Umberson 1987).

We have already mentioned the literature examining the association between mental health/psychological distress and marital instability. The evidence supports both selection and causation explanations (Hope, Rodgers & Power 1999; Wade & Pevalin 2004). Of course, it may be that the apparent selection into marital instability of those with mental illness reflects underlying factors associated with poor mental health such as financial hardship and socioeconomic disadvantage, and relationship conflict. At the couple level, Merikangas (1984) suggested the effects of mental illness are multiplicative, with rates of instability disproportionately greater when both partners experience mental illness, compared to the risk when only a single partner is ill. In terms of gender differences, Bradbury and Norris (2004) found that couples in which men's mental health was poorer than their partner's mental health had greater risk of relationship instability.

There is less evidence of an association between physical health and marital instability. Fu and Goldman (2000) found no evidence that physical health was associated with subsequent relationship instability, though it must be recognised that the sample used in the analysis was relatively young (the National Longitudinal Survey of Youth which tracked over 14 years people aged 14 to 22 years at the initial interview). In contrast, Joung et al. (1998) found that married individuals who reported poor health (either subjective health complaints or multiple chronic medical conditions) were significantly more likely to become divorced over a four year follow-up period than those who did not report poor health. Their study analysed data representing respondents across the entire life course (aged 15–74 years). At the other end of the age spectrum, Wilson and Waddoups (2002) reported analysis of the US Health and Retirement Survey and found that health mismatches between spouses was associated with later marital instability, but only for those couples that initially reported satisfaction with the relationship. Joung et al. (1998) noted that the measures of health used were associated with other factors such as education, demonstrating why one must be cautious when interpreting any observed association between health and marital instability.

Alcohol consumption is associated with marital status in cross-sectional data (Fu & Goldman 1996; Power, Rodgers & Hope 1999). Heavy levels of alcohol consumption are associated with marital dissatisfaction, negative interactions, and violence (Marshal 2003), but again the issue of the causal direction of the relationship is critical. Marital instability may be a precipitating factor in harmful alcohol consumption (Power, Rodgers & Hope 1999). In analysis of data from the US Health and Retirement Survey similar to that

we are undertaking, Ostermann, Sloan and Taylor (2005) found evidence that couples discordant in drinking behaviour at Wave 1 were more likely to divorce (the couples more likely to separate were: wife abstainer and husband heavy drinker; and wife moderate drinker and husband abstainer). There was, however, no evidence of a main effect of alcohol consumption—that is, heavy drinkers did not report elevated divorce rates compared with others. Again, the restricted older age range of the sample may be contributing to the particular pattern of results observed.

Finally, just as data show that, on average, those who are married have better health than those who are not married, marriage is also associated with non-smoking and smoking cessation (Chandola, Head & Bartley 2004; Siapush & Borland 2001). The relationship between smoking and marital status may reflect the availability of support, social regulation and control from one's spouse (Nystedt 2006). Rates of smoking and the success of attempts to cease smoking are influenced by spouse smoking habits, while women (and to a lesser extent men) with a smoking spouse are at increased risk of commencing or returning to smoking (Daly et al. 1993; Homish & Leonard 2005; Severson et al. 1995).

Smoking provides an interesting illustration of how health and health behaviours may be related to marital disruption. Whereas smoking was once normative behaviour, with increasing awareness of adverse health effects smoking has become a marker of disadvantage, including material, social, cultural and regional disadvantage, low education and low socioeconomic status (Graham 1995; Graham et al. 2006; Laaksonen et al. 2005; Nystedt 2006; Rahkonen, Laaksonen & Karvonen 2005). Some argue that smoking is a form of self-medication, with the biological effects of nicotine being used to relieve the distressing effects of mental illness, economic hardship and social isolation (see Nystedt 2006). Graham (1995) identified four factors influencing women's smoking behaviour: daily caring responsibilities and paid work; material circumstances; social support and social networks; and personal and health resources. She concluded that for many low-income women, the experience of severe economic pressures, adverse social relationships and significant caring responsibilities completely taxed their adaptive capacity. Thus, within such a socioeconomic environment, the potentially adaptive nature of smoking can be recognised. In more recent research, Graham et al. (2006) have shown how women's smoking status is sensitive to a range of measures of the socioeconomic life course, including not only childhood social background, educational achievement and occupational status, but also characteristics reflecting the socioeconomic position of women's domestic circumstances, including relationship characteristics.

Little is known, however, about the dynamic relationship between smoking and marriage, such as whether change in marital status is related to smoking behaviour or change in smoking behaviour is related to change in marital status. McKee et al. (2003) found that negative change in financial circumstances (a characteristic often linked to marital disruption) was associated with women's smoking behaviour, with a reduction in rates of quitting and higher relapse rates than for men in similar circumstances. Nystedt (2006) reported that marital disruption was associated with relapse or commencing smoking, and that the effect was stronger for women than for men. Unlike these studies, which identify social stressors as leading to increased rates of smoking, Fu and Goodman's (2000) analysis of younger adults showed that smoking (measured prior to marriage) was associated with an increased risk of later divorce, with rates particular elevated for male smokers. In their discussion, Fu and Goodman express uncertainty about whether smoking may be the cause of conflict among couples, or whether the association between smoking and marital instability reflects underlying characteristics of smokers, such as poorer quality marriages or greater levels of deprivation. We think the association is likely to reflect the effectiveness of smoking as a marker of disadvantage and hardship (economic, psychological and social). In this way, we think the association between smoking and marital instability may be similar to the relationship between welfare receipt and marital instability discussed by Gregory and Klug (2003) and Bradbury and Norris (2005b). In our analysis we will consider whether the relationship between smoking and marital instability is explained by measures of financial circumstances.

3.3   Summary

We have outlined the variables that we will be examining in our prospective study of marital disruption using HILDA survey data. We feel that the study makes a significant contribution to the literature through the:

◗ breadth of the study and range of predictors examined

◗ survey sample, which covers the full adult life span and avoids the limitations of many of the previous studies (exclusively young or older populations)

◗ consideration of health and health behaviours in addition to social and demographic characteristics

◗ inclusion of the characteristics of both spouses and the interaction between spouses

◗ focus on longitudinal data.

4   Data

Data are from the HILDA survey (release 3.0), a nationally representative household panel survey. The HILDA survey is funded by FaHCSIA and managed by a consortium led by the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne. The survey utilises a multi-stage sampling approach (sampling households within Census Collection Districts) and is stratified by state and part-of-state. Data are collected annually and this analysis is based on the first three waves of data (2001, 2002 and 2003).

Four survey instruments were included in each wave. A *Household Form* and *Household Questionnaire* were completed during a personal interview with one adult member of each household. The *Person Questionnaire*, also administered by personal interview, was conducted with all adult household members. Finally, a *Self-Completion Questionnaire* (SCQ) was provided to all respondents to the *Person Questionnaire* and was collected at a later date or returned by post.

In Wave 1, a total of 7,682 households responded to the survey (a household response rate of 66 per cent). Within these households, there were 15,127 eligible adults. Of this group, 13,969 (92 per cent) completed the *Person Questionnaire* and 13,055 (86 per cent) completed and returned an identifiable SCQ.

Of the 13,969 respondents at Wave 1, 11,993 were re-interviewed in Wave 2 and 11,190 were re-interviewed in Wave 3. The attrition rate (excluding those respondents who were out of scope) was 13.2 per cent for Wave 2 and 9.6 per cent for Wave 3. At the household level, 78.6 per cent of households were fully responding households at Wave 2 (that is, all eligible members completed interviews) and 8.5 per cent were partially responding households. At Wave 3 the corresponding figures were 74.5 per cent and 7.4 per cent.

For more information on the HILDA survey, see Watson (2005), and Watson and Wooden (2002).

5   Methods and measures

5.1   The sample

The initial phase of the project involved matching the data from survey respondents who were married or in a de facto relationship at Wave 1. We then tracked these couples (pairs of respondents) across the subsequent waves of data. Our initial sample included 1,922 different-sex couples (3,844 men and women). For all couples, both partners reported that they were in a relationship (either legal marriage or de facto relationship), both partners were resident in the same household, and there were resident dependent children (under the age of 15).

We filtered the sample by excluding those couples in which either partner was a non-responding person or who did not complete the SCQ (given that many measures used in the analysis were derived from the SCQ) at Wave 1, and those couples for which no information was available in subsequent waves. This reduced the effective sample to 1,498 couples.

Two measures were used to identify couples that had separated after Wave 1:

◗   an indirect measure based on a discrepancy in household (that is, male and female were residing in different households in subsequent wave/s)

◗   a direct measure based on reported marital status.

Of the 1,498 couples: 1,384 (92.4 per cent) were classified as intact couples over the three waves of data and 114 (7.6 per cent) were identified as couples that had separated or divorced.

5.2   Research strategy

We adopted a systematic approach in our analysis, which proceeded through a series of steps.

1)   Initially, we examined the presence of spousal similarity or concordance for each of the characteristics under investigation.

2)   We tested whether there was a general association between the presence of each characteristic within a couple (reported by either one or both partners) and subsequent separation/divorce using simple logistic regression models.

3)   Where an association was demonstrated, we examined the specific nature of the relationship between the characteristic and subsequent separation: does the greater risk of separation reflect the male's and/or the female's characteristics (main effects); is there an interaction or cumulative effect of partners' characteristics?

4)   Finally, we developed a multivariate logistic regression model in which we sequentially include the characteristics in five blocks. We used the results of the previous analyses to guide decisions about the specific terms to incorporate (for example, interaction effects, global couple effects if there were high levels of similarity between partners, and so on). The categories into which measures were grouped were: family background, financial circumstances, relationship characteristics, social circumstances, and personal characteristics.

5.3 The dependent variable

Relationship dissolution was coded '0' if the couple remained intact across the three survey waves and '1' if the relationship ended in separation or divorce.[1]

5.4 Independent variables

Table 1 summarises the independent variables used in the analysis. All independent variables were derived from the Wave 1 survey data. We adopt a public health/risk-factor approach in our analysis and focus on categories of the independent variables that represent clinically-relevant conditions and/or the presence or absence of an important characteristic.

Personal characteristics

◗ **Age:** a continuous variable with a range of 19–75 years for men and 17–66 years for women. Age is both a personal feature and an indicator of temporal circumstances and cohort membership.

◗ **Poor physical functioning:** based on the physical functioning scale from the SF-36, which was scored using the standard scoring procedure. The scale was based on 10 items inquiring about ability to perform everyday physical activities during the four weeks prior to answering the questionnaire (for example, bathe and dress independently; lift or carry groceries, and so on). Scores on this scale range from 0–100. As in our previous research, we define 'poor physical functioning' as a score under 60 on the scale. This variable is used in the model as either '0' (scores of 60 or more) or '1' (scores under 60).

◗ **Poor mental health:** As discussed, according to the theories of social selection, poor mental health may precede and be a factor leading to marital disruption: that is, people's mental health problems increase the likelihood that they will experience relationship instability (that is, selection out of marriage). In contrast, social causation or stress theories posit that psychological distress is a consequence of relationship dissolution (though this distress may have been present for a number of years prior to the eventual act of separation) or other secondary factors associated with divorce such as financial hardship.

The measure of mental health used in the current analysis is based on the mental health inventory, a five-item scale from the SF-36. The individual items inquire about mood and feelings during the four weeks prior to answering the questionnaire (for example, 'Have you felt down?', 'Have you been a happy person?'). Possible scores range from 0–100. As in our previous research, we define 'poor mental health' as a score under 50 (coded '0' for scores of 50 or more and '1' for scores under 50).

◗ **Risk behaviours:** We considered smoking and alcohol consumption. These can be considered measures of health status in that they have a negative impact on individual health, can be considered a response to adverse life circumstances (a form of self-medication in response to adversity including relationship difficulties), and can be considered a measure of personal preferences, attitudes and/or values.

– **Smoking:** We distinguished current smokers (coded as '1') from non-smokers (coded '0'). The non-smoker category included those who had never smoked and former smokers.

– **Alcohol consumption:** The drinking measure was based on two items included in the SCQ measuring frequency and quantity of alcohol consumption. These two factors were combined to estimate average weekly alcohol consumption. We classified three classes of drinkers: 'heavy drinkers' were those who reported alcohol consumption at or above the Australian National Health and Medical Research Council definition of hazardous/harmful levels (rates which differ for men and women); 'moderate drinkers' were those who drank at levels below the defined criteria; and 'non-drinkers' were those who reported that they did not drink alcohol at all.

◗ **Religiosity:** Previous research has found that religious affiliation has a strong association with marriage instability (see Mahoney et al. 2001). Similar to Hewitt, Baxter and Western (2005), we derived a measure of religiosity from an attitudinal question enquiring about the importance of religion, with responses on a scale of '0' (not important) to '10' (very important). We classified religiosity as 'low' (scores 0–3), 'moderate' (scores 4–6), or 'high' (scores 7–10).

◗ **Life satisfaction:** We also examined the association between relationship dissolution and general life satisfaction, a general measure of wellbeing (Dear, Henderson & Korten 2002). The measure of satisfaction was based on an item which asked respondents to rate their 'satisfaction with their life in general' on a scale ranging from '0' (totally dissatisfied) to '10' (totally satisfied). Our dummy-coded measure contrasted those who reported being 'satisfied with life' (scores above the mid-point—6–10—coded as '0') with those who were 'not satisfied with life' (scores 0–5—coded as '1').

Background factors

◗ **Parental divorce experience:** Extensive research has shown that experience of parental divorce or parental separation is associated with an increased likelihood of own marital dissolution (Amato 1996). We identified respondents who reported that their parents had divorced or separated.

◗ **Total number of relationships:** There is also evidence that higher order marriages are more likely to dissolve than first marriages (Lillard, Brien & Waite 1995). Given that we are considering couples in both marriage and de facto relationships, we computed a measure of 'total number of marriage-like relationships' as a combination of number of de facto relationships (including current) and number of marriages (including current). We coded this variable to represent '1', '2', or '3 or more' relationships.

Social circumstances

◗ **Education level:** We utilise education level as a measure of social status and sociodemographic background (Fryers, Melzer & Jenkins 2003; Fryers et al. 2005). Social status is strongly associated with relationship dissolution (Bradbury & Norris 2005b). In addition, the combination of each partners' social (and financial) circumstances may be associated with subsequent separation. A woman with higher social status (educational attainment, occupation) has greater economic independence (or potential) and this may provide greater opportunity for her to support herself outside of marriage if the relationship is not satisfactory. Further, relationships in which women's social status is greater than their partner's are not consistent with the traditional gendered role specialisation within marriage and this itself may lead to greater interpersonal conflict within the marriage and marital instability (see Bumpass, Martin & Sweet 1991; Hewitt, Baxter & Western 2005).

We categorise three levels of highest education attainment: tertiary degree (Bachelor degree or higher) as reference category; completed secondary schooling, trade or diploma qualification; and incomplete secondary education.

Financial situation variables

The research by Bradbury and Norris (2005b) demonstrated an income gradient in marital disruption. Those in poorer immediate financial circumstances have a greater likelihood of separation/divorce than those in more advantageous financial situations. This could reflect the stressors placed on a relationship by financial difficulties, or could reflect the broader socioeconomic effects that select couples into marital instability (and which we try to explain with the measures of educational attainment). The following measures are included as potential economic correlates of separation.

◗ **Labour force status:** This variable is divided into three categories: employed (either full-time or part-time; the reference category); unemployed; and not in the labour force.

◗ **Financial hardship:** This variable was derived from a series of seven questions assessing financial hardship (for example, could not pay electricity, gas or telephone bills on time; not able to pay mortgage or rent

on time). Our previous research has shown that these items may load on a single factor. We developed a summary measure coding:

– no hardship ('0')

– one hardship ('1')

– two or more hardships ('2').

◗ **Income support status:** This variable was derived from questions inquiring about receipt of government benefits, pensions or allowances. This variable is coded as '1' if the respondent declared receiving income support payments at the time of interview.

Relationship characteristics

◗ **Combined marital status:** There is debate within the literature about the effect of prior cohabitation on marriage. Descriptive research has found that couples that cohabited prior to marriage were more likely to separate or divorce than those who did not cohabit (Karney & Bradbury 1995). However, more recent analysis has suggested that this effect may, in part, be cohort specific, with the effect less strong in later-born couples. Further, more sophisticated analysis has indicated that the effect is largely a selection effect, with rates of subsequent divorce/separation no longer significantly elevated for those married couples that cohabited once factors associated with selection into cohabitation are controlled (de Vaus, Qu & Western 2003; Lillard, Brien & Waite 1995). Given our analysis of married **and** de facto couples, we define three categories of marital status:

– couples that are married and did not cohabit prior to marriage (the reference category)

– married couples that cohabited prior to marriage

– de facto couples.

◗ **Total number of dependent children in the household:** The presence of children is hypothesised to increase the stability of relationships (Wilson & Waddoups 2002). In this measure we consider the number of resident children (aged 0–14 years) within the household without differentiating whether they are shared child(ren) of both members of the couple or the child(ren) of only one adult. This variable is top-coded as '1', '2', or '3 or more' children.

◗ **Age of youngest child:** Previous research has found that the presence of young children reduces the risk of marriage breakdown (Waite & Lillard 1991). This categorical variable is coded to indicate the presence of pre-school aged children (aged 0–4 years; reference category) and school age children (aged 5–14 years).

◗ **Presence of stepchildren:** The previous literature has identified the presence of stepchildren as being associated with marital instability (Karney & Bradbury 1995). We defined this variable at the individual level and it is coded as '1' if the household included children who are not the natural or adopted child of the respondent (that is, partner's children or own stepchildren) and '0' (reference category) if all children are the respondents' natural or adopted children. It is possible, therefore, that one respondent in the household is coded as a step-parent (most commonly the man) while the other member of the couple is the natural/adopted parent of all children in the household (usually the woman).

◗ **Relationship duration:** Hewitt, Baxter and Western (2005) found that marital breakdown in Australia was greatest within the first five years of marriage. Our models include a variable coded as '0' if relationship duration was more than five years and '1' if relationship duration was five years or less.

◗ **Relationship satisfaction:** Similar to the measure of overall satisfaction with life, a measure representing lack of relationship satisfaction was derived from an item which asked respondents to rate how satisfied they were with their relationship with their partner.

Table 1:   Summary of variables used in analysis

Variable	Values	Definitions/notes
Age (years)	17–75	Entered in all multivariate regressions
Poor physical functioning	'0' (PFI ≥60) '1' (PFI <60)	Not poor physical functioning (ref) Poor physical functioning
Poor mental health	'0' (MHI ≥ 50) '1' (MHI <50)	Not poor mental health (ref) Poor mental health
Smoking	'0' '1'	Non-smoker (ref) Current smoker
Drinking	'0' '1' '2'	Moderate drinkers (ref) Non-drinkers Heavy drinkers
Religiosity	'0' (0<R<3) '1' (4<R<6) '2' (7<R<10)	Low (ref) Moderate High
Life satisfaction	'0' (6<LS<10) '1' (0<LS≤5)	Satisfied (ref) Not satisfied
Parental divorce	'0' '1'	No (ref) Yes
Total number of relationships	'1' '2' '3'	Only current relationship (ref) 2 relationships 3 or more relationships
Education level	'0' '1' '2'	Tertiary (ref) Secondary/diploma Year 11 or less
Labour force status	'0' '1' '2'	Employed (ref) Unemployed Not in labour force
Financial hardship	'0' '1' '2'	No hardship (ref) 1 hardship 2 or more hardships
Income support status	'0' '1'	No benefits (ref) Receives benefits
Combined marital status	'0' '1' '2'	Married, no prior cohabitation (ref) Married, prior cohabitation Currently de facto
Number of dependent children in household	'1' '2' '3'	1 child (ref) 2 children 3 or more children
Age of youngest child	'0' '1'	Pre-school (ref) School (5–14)
Presence of stepchildren	'0' '1'	No (ref) Yes
Relationship duration	'0' '1'	More than 5 years (ref) 5 years or less
Relationship satisfaction	'0' (6<RS<10) '1' (0<RS≤5)	Satisfied (ref) Not satisfied

6 Results

6.1 Descriptive statistics

Table 2 displays the Wave 1 characteristics of the individuals from couples that separated or remained intact over the subsequent two waves of the survey. Considering the personal characteristics of both men and women, those in couples that separated:

◗ were on average slightly younger

◗ had notably poorer mental health

◗ had much higher rates of smoking, parental divorce and dissatisfaction with life

◗ reported lower levels of religiosity

◗ were much more likely to report previous marriage-like relationships than those in couples that did not separate.

Those who separated were more likely to have:

◗ been unemployed (particularly men)

◗ experienced financial hardship

◗ received income support payments

◗ had shorter relationships

◗ been in de facto relationships

◗ had stepchildren

◗ reported relationship dissatisfaction.

In the next sections we test the magnitude of these differences between intact and separated couples, look at whether these are simply a function of other demographic differences between the groups, and consider the significance of these factors as predictors of subsequent separation.

Table 2:   Baseline differences between men and women, in couples with children, that separate or remain intact

	Male		Female	
	Intact couples	Separating couples	Intact couples	Separating couples
	1,384	114	1,384	114
Age (years)				
Mean	39.18	37.65	36.62	35.32
Standard error	0.19	0.75	0.18	0.70
Physical function (%)				
Poor functioning	8.9	14.0	7.2	13.2
Mental health (%)				
Poor mental health	6.7	19.3	8.8	17.5
Smoking (%)				
Smokers	25.4	47.7	18.8	44.7
Drinking (%)				
Heavy drinkers	5.4	8.8	4.2	5.3
Moderate drinkers	85.6	80.5	83.5	81.5
Non-drinkers	9.0	10.6	12.3	13.2
Life satisfaction (%)				
Dissatisfied	6.1	11.4	5.0	13.2
Religiosity (%)				
High	26.8	21.1	35.9	23.7
Moderate	22.0	17.5	25.5	28.9
Low	51.2	61.4	38.6	47.4
Parental divorce (%)	17.7	35.1	21.1	36.8
No. of relationships (%)				
1 relationship	73.7	46.0	74.5	48.7
2 relationships	16.8	30.1	16.9	28.3
3+ relationships	9.5	23.9	8.6	23.0
Education level (%)				
Tertiary	24.6	14.9	23.8	18.4
Secondary/diploma	54.4	57.0	47.4	48.3
Year 11 or less	21.0	28.1	28.8	33.3
Labour force (%)				
Employed	91.9	84.2	62.8	58.8
Unemployed	2.8	10.5	2.7	6.1
Not in labour force	5.3	5.3	34.5	35.1
Hardship (%)				
No hardship	69.7	43.0	67.8	47.4
1 hardship	13.4	18.4	15.4	13.2
2+ hardships	16.8	38.6	16.8	39.5
Receiving income support (%)	8.4	21.1	16.9	24.6
Marital status (%)				
Married, no cohabit	43.2	19.3	43.4	21.1
Married, prior cohabit	46.4	43.0	46.4	41.2
Currently de facto	10.4	37.7	10.2	37.7
Relationship duration (%)				
5 years and less	12.7	36.0	12.7	36.0
More than 5 years	87.3	64.0	87.3	64.0

	Male		Female	
	Intact couples	Separating couples	Intact couples	Separating couples
	1,384	114	1,384	114
Age of youngest child (%)				
Pre-school (0–4)	47.4	55.3	47.4	55.3
5–15	52.6	44.7	52.6	44.7
No. of children (%)				
One	32.7	38.6	32.7	38.6
Two	43.4	38.6	43.4	38.6
Three or more	23.9	22.8	23.9	22.8
Has stepchildren (%)	9.6	28.1	2.1	6.1
Relationship satisfaction (%)				
Dissatisfied	6.2	16.1	8.8	31.9

6.2 Evidence of spousal concordance

Firstly, simple logistic regression models and chi-square test of association were used to examine spousal concordance for the characteristics under investigation: that is, the likelihood that spouses have similar characteristics (see Table 3).

There was considerable statistical evidence of spouse similarity for the characteristics being studied. Respondents were three to four times more likely to report physical and mental health problems if their spouse/partner reported similar health problems. If one's partner was a smoker, the odds of being a smoker oneself were increased eight times. Having a partner who had experienced parental divorce was associated with increased odds (38 per cent) of having experienced parental divorce oneself compared to those whose partner had not experienced parental divorce. Respondents who had a partner who reported being not satisfied with life were 3.5 times more likely to be not satisfied themselves. Similarly and not surprisingly, if one's partner was not satisfied with the relationship the respondent's odds of not being satisfied were increased more than 11 times compared to when one's partner reported relationship satisfaction. Income support receipt was also very much a characteristic shared by both members of a couple.

Table 3:   Partner consistency assessed by logistic regression models and chi-square test of association

Characteristic	Odds ratio
Poor physical health	4.36***
Poor mental health	3.02***
Smoking	8.03***
Dissatisfied with relationship	11.42***
Dissatisfied with life	3.52***
Receiving income support	17.45***
Experienced parental divorce	1.39*
	$\chi2^{(a)}$
Drinking	316.9***
Labour force status	83.3***
Financial hardship	771.0***
No. of relationships	244.1***
Educational attainment	270.1***
Religiosity	412.1***

(a)   Degrees of freedom for tests=4.
Note: *p<0.05; **p<0.01; ***p<0.001.
    χ2=chi-squared.

The results were similar for the multi-category variables. For example, there was a significant association (reflecting greater consistency in partner's responses than anticipated by chance) for alcohol consumption, education level, labour force status, financial hardship, previous relationships and religiosity.

These findings support the hypothesis of assortative mating and/or convergence of the partners' characteristics over time. The implications of this are potentially substantial. When one finds, for example, an effect of mental health on separation in analyses based on the individual, it is unclear whether this reflects an effect of the mental health problems of one partner or possibly both. Further, if spousal selection is based on these characteristics, it could be argued that selection of a partner is based on factors that actually increase the likelihood of separation. Thus, it is important to consider the influence of the characteristics of both partners and the combination of characteristics on marital stability.

6.3 Couple-level characteristics predicting marital instability

Table 4 presents the odds ratios associated with relationship dissolution, given that the specified characteristic is evident in at least one partner. These simple regression results show the global effect of each characteristic on separation without taking into consideration (or controlling for) any other variables (multivariate regressions are performed in a later stage of the analysis).

Table 4: Results of univariate models showing odds ratio for separation given the presence of the characteristics in at least one partner

Characteristic evident in at least one partner	Odds ratio for separation
Poor physical function	1.99**
Poor mental health	2.79***
Smoking	3.72***
Drinking	
Heavy drinking	1.54
Abstainer	1.50
Religiosity	
Highly important	0.66*
Low importance	1.60*
Not satisfied with relationship	4.20***
Not satisfied with life	2.47***
Labour force status	
Unemployed	3.52***
Employed	0.48*
Any reported financial hardship	3.13***
Receiving income support	1.84**
Educational attainment	
Not completing secondary education	1.44[a]
Parental divorce	3.08***
Previous marriage-like relationship	3.20***
Presence of stepchildren	2.87***

(a)   p=0.063.
Note: *p<0.05; **p<0.01; ***p<0.001.

The results presented above show that most of the variables being examined were associated with separation. Poor physical health almost doubled the odds of separation. Similarly, couples in which mental health problems were reported were approximately three times more likely to separate than couples that reported no mental health problems. Smoking was also strongly associated with relationship dissolution. Religiosity was found to be significantly associated with subsequent separation: for couples in which either or both partners

declared strong religious affiliation the odds of separation were significantly reduced. A lack of satisfaction with life and with one's relationship were associated with separation. Unemployment and receipt of income support payments were associated with increased likelihood of separation. The experience of parental divorce was significantly associated with future separation, with the odds of separation three times greater for couples in which either or both partners had experienced parental divorce compared to couples in which neither partner reported parental divorce. The presence of stepchildren was also found to significantly increase the odds of separation.

Some characteristics examined were not associated with separation/divorce in the subsequent two waves of data. There was no effect of alcohol consumption: neither heavy drinking nor non-drinking was associated with the likelihood of future separation. Those couples in which at least one person had not completed secondary education were also somewhat more likely to separate, though this effect was only of marginal statistical significance (p=0.063).

There were other couple characteristics that were specifically measured at the level of the couple (for example, relationship duration, marital status). The relationship between these measures and subsequent separation are presented later in the report (Table 9).

In summary, these initial results were generally consistent with the previous literature. The findings demonstrated the relevance of the characteristics investigated as predictors of relationship dissolution. The next section, therefore, will consider the individual main and interaction effects of these characteristics for men and women.

6.4   Examining the characteristics of both members of couples

In this section we examine whether the characteristics of the man and/or the woman within each couple (main effects) and/or the combination or interaction of partners' characteristics are associated with subsequent separation. That is, is separation associated with the experience of these characteristics in either member of the couple, a particular member of the couple (man or woman), couples in which both partners experience the characteristic, or couples in which the partners are dissimilar?

We conducted these analyses in three steps:

1) examined the significance of each partner's characteristics on separation through simple univariate logistic regression models

2) considered both partners' characteristics simultaneously and assessed the significance of the unique contribution of each partner (does the inclusion of the partner improve the fit of the model and are the individual measures significant)

3) tested the significance of the interaction between men and women's characteristics. The interaction term was included in the final model when its inclusion significantly improved the overall fit of the model above the model comprising the two main effects.

Using this stepped approach allowed us to establish the nature of the association between each of the characteristics and subsequent relationship dissolution. Where there was an association in the univariate results, we could ascertain whether the inclusion of data from the partner improved prediction or whether it accounted for the predictive power. This helped to identify the important variables to include in the full model and avoid redundant variables.

Poor physical functioning: Table 5 presents the results of the series of analyses, looking at the effect of poor physical health. Initially, separate analysis of data for men and women found that men who reported poor physical functioning had a somewhat elevated risk (though not significant) of experiencing marital disruption. However, couples in which the women reported poor physical functioning were significantly more likely to separate than couples in which women did not report poor physical functioning. The inclusion of spouse

physical functioning did not improve the fit of either model. When examining both partners' characteristics simultaneously, we found that the effect of both men's and women's physical functioning was reduced to non-significance. The inclusion of the interaction term did not significantly improve overall model fit.

Table 5:   Results from logistic regression models reporting the association between poor physical functioning and subsequent separation

Regression stage		Men Odds ratio	Women Odds ratio
(1) univariate	Poor physical function	1.67[a]	1.94*
(2) combined	Does including spouse improve model fit?	No	No
	Poor physical function	1.50	1.78[b]
(3)	Does interaction improve model fit?	No	

(a)   p=0.07.
(b)   p=0.056.
Note: *p<0.05; **p<0.01; ***p<0.001.

Poor mental health: Univariate analyses found significant effects of both men's and women's mental health on subsequent separation. Men with mental health problems at Wave 1 were over three times more likely (odds ratio [OR]=3.3) to experience separation/divorce than men who did not report mental health problems. The risk for women was somewhat less than this (OR=2.2). The inclusion of spouse mental health improved the fit of both models. When considered together, the odds ratios from the univariate analyses were somewhat reduced (reflecting some common effect between partners), but both men's and women's mental health remained significant predictors of subsequent relationship instability. The interaction term was not significant and did not improve the fit of the model over that with the two main effects.

Smoking: Both men's and women's smoking status were associated with the likelihood of future separation (Table 6), with smokers having greater odds of separation than non-smokers and the effect being of greater magnitude for women. The inclusion of spouse smoking status improved the fit of both models, and in the multivariate model both main effects were reduced compared to the univariate results but remained significant. For analysis of smoking status, the inclusion of the interaction effect significantly improved overall model fit. Thus, the effect of smoking status depends on partner's smoking status. We will further investigate the nature of this smoking interaction in the next section.

Table 6:   Results from logistic regression models reporting the association between smoking and subsequent separation

Regression stage		Men Odds ratio	Women Odds ratio
(1) univariate	Smoking	2.69***	3.54***
(2) combined	Does including spouse improve model fit?	Yes	Yes
	Smoking	1.77*	2.73***
(3)	Does interaction improve model fit?	Yes*	

Note: *p<0.05; **p<0.01; ***p<0.001.

Drinking: Similar to the results from the analysis of couple characteristics, there was no relationship between either men's or women's alcohol consumption (abstainers, drinking at hazardous/harmful levels, or other) and future separation.

Religiosity: The univariate analyses showed that, for men, religiosity was not associated with subsequent separation, but that women's religiosity was associated with marital stability. Couples comprising women who reported high religiosity were significantly less likely to separate than couples in which women reported that religion was of moderate or low importance in their lives (OR=0.54). This pattern remained in the models that included data from both members of the couples.

Life satisfaction: Simple logistic regression models showed that, for men and women, not being satisfied with life was associated with an increased likelihood of separation, with the effect greater for women (OR=2.9) than for men (OR=2.0). The inclusion of spouse characteristics only improved the fit of the univariate model representing men's life satisfaction, providing further support of the relative importance of this variable for women. Consistent with this, the combined analysis found that only women's dissatisfaction remained a significant unique predictor of separation (OR=2.7).

Parental divorce: In accordance with previous research, we also found a significant association between parental divorce and separation (Table 7). The univariate results showed that couples where men had experienced parental divorce were 2.5 times more likely to separate, and couples where the women had experienced parental divorce were more than twice as likely to separate as couples where partners had not experienced parental divorce. Again, these significant effects remained in the combined analysis. The inclusion of spouse characteristics improved both of the models tested. Further, the interaction term was marginally significant and will be explored in the next section.

Table 7:   Results from logistic regression models reporting the association between parental divorce and subsequent separation

Regression stage		Men Odds ratio	Women Odds ratio
(1) univariate	Parental divorce	2.52***	2.19***
(2) combined	Does including spouse improve model fit?	Yes	Yes
	Parental divorce	2.42***	2.09***
(3)	Does interaction improve model fit?	Marginal[a]	

(a)   p=0.056.
Note: *p<0.05; **p<0.01; ***p<0.001.

Total number of (marriage-like) relationships: Simple univariate logistic regression models showed that couples in which either partner had a previous relationship (that is, a marriage-like relationship prior to their current relationship) were at increased risk of separation, and that the magnitude of the effect was similar for men and women. Couples where either men or women had one previous marriage-like relationship were around 2.5 times more likely to separate. The odds of separation increased with the number of previous relationships. The inclusion of spouse characteristics improved the fit of each model and, while it was evident that the effects were somewhat attenuated in the combined model (because men and women with previous relationships were likely to re-partner with others in similar circumstances and, thus, there was overlap between the characteristics of both partners), all effects remained significant.

Educational attainment: Considering the effects of educational attainment separately for men and women, it was evident that couples where the male partners had less than a high school level of education were twice as likely to separate as couples in which men had a tertiary degree (Table 8). Couples where men had completed secondary schooling and/or had a diploma level degree also reported an elevated risk of marital dissolution in comparison to those with tertiary qualifications. There was, however, no effect of women's educational

attainment on rates of separation. The effect of men's education level remained significant in the combined model. Furthermore, the inclusion of the interaction terms marginally improved the overall fit of the model with one of the specific interaction terms highly significant. This will be examined in the next section.

Table 8:   Results from logistic regression models reporting the association between educational attainment and subsequent separation

Regression stage		Men Odds ratio	Women Odds ratio
(1) univariate	Education attainment:		
	Tertiary degree (ref)	1.72[a]	1.32
	Secondary or diploma		
	Year 11 or less	2.21*	1.49
(2) combined	Does including spouse improve model fit?	No	No
	Education attainment		
	Tertiary degree (ref)	1.66	1.09
	Secondary or diploma		
	Year 11 or less	2.09*	1.13
(3)	Does interaction improve model fit?	Marginal[b] One highly significant term**	

(a)   p=0.052.
(b)   p=0.07.
Note: *p<0.05; **p<0.01; ***p<0.001.

Labour force status: The results of analysis of labour force status showed that there was a significant effect of men's unemployment on relationship dissolution. Couples in which men were unemployed were approximately four times more likely to separate than couples in which men were employed (OR=4.1), and this effect remained significant in the combined model (OR=3.8). While women's unemployment was a significant factor in the simple logistic regression (OR=2.5), it did not significantly contribute in the combined model. The inclusion of men's labour force status improved the fit of the model, whereas the inclusion of women's labour force status did not improve model fit. Thus, it seems that the labour force status of men accounts for the relationship between unemployment within the couple and subsequent separation. There was, however, no association between absence from the labour force for reasons other than unemployment and separation.

Hardship: Simple logistic regression models found that experience of financial hardship was associated with subsequent divorce/separation. Separation rates for couples in which men reported hardship were elevated compared to those where men reported no hardship (with a linear relationship between the number of hardships reported and risk of marital disruption). Couples in which women reported multiple hardships were also at increased risk of separation. While the inclusion of spouse financial hardship improved both models, the combined results demonstrated that only men's reported hardship was independently associated with subsequent separation.[2]

Income support status: Simple logistic regression models showed that both men's and women's receipt of income support benefits was associated with subsequent separation. However, similar to the financial hardship results, the combined regression models showed that only the effects for men were significant independent predictors of relationship dissolution. Given the very strong association between couples' income support status (see earlier discussion in 6.2), this suggests that, in general, it is men's status that captures the aspects of financial circumstances of couples that are most relevant to future separation.

Combined marital status: The next set of analyses involved data at the couple level, and the results are presented in Table 9. Simple logistic regression results showed that, compared to married couples who did not cohabit prior to marriage, married couples that reported pre-marital cohabitation were almost twice as likely to separate in the subsequent two years. Furthermore, those couples in a de facto relationship had a much higher risk of separation compared to married couples that had not cohabited.

Table 9:   Results from logistic regression models reporting the association between separation and marital status (A), relationship duration (B), number of children (C) and age of youngest child (D)

Regression model		Couple Odds ratio
A	Marital status	
	Married, no prior cohabitation (ref)	
	Married, prior cohabitation	1.83*
	Current de facto relationship	7.57***
B	Relationship duration	
	Relationship ≥ 5 years (ref)	3.83***
	Relationship < 5 years	
C	Number of children	
	One (ref)	
	Two	0.75
	Three or more	0.81
D	Age of youngest child	
	Less than 5 (reference)	
	Aged 5 years or greater	0.73

Note: *p<0.05; **p<0.01; ***p<0.001.

Relationship duration: This analysis also involved data at the couple level. The results showed that the odds of separation were almost four times greater for couples with relatively short relationships (less than five years) compared to those with longer relationships.

Number of children: There was no evidence of a relationship between number of children in a household and the risk of subsequent marital dissolution.

Age of youngest child: There was no significant difference in the risk of separation of couples whose youngest child was pre-school aged or older (school-aged).

Presence of stepchildren: This analysis focused on those individuals within couples who were step-parents: that is, they did not report themselves as the natural or adopted parent of one or more of their partner's children. Simple logistic regression models showed that the likelihood of separation was much greater for couples in which either men or women reported having stepchildren (ORs>3). The combined regression models showed that it was men with stepchildren that made the significant independent contribution to predicting subsequent separation (OR=3.5 versus 1.4 for women).

Relationship satisfaction: Simple logistic regression models showed that when either men or women reported not being satisfied with their relationship, the likelihood of later separation was significantly increased. However, the combined regression results showed that only women's lack of relationship satisfaction was a significant independent predictor of relationship dissolution (OR=4.3 versus 1.5 for men).

6.5   Exploring the interaction effects

A primary goal and one of the unique features of this analysis is to examine simultaneously how the characteristics of husbands and wives together predict subsequent relationship dissolution. The results reported in the previous section identified a number of significant interaction effects between men's and women's characteristics and the likelihood of subsequent divorce/separation: smoking status, experience of parental divorce, and education level. This section examines the nature of these interaction effects in more detail.

Smoking: Figure 1 presents the association between men's and women's smoking status and rates of separation. To facilitate interpretation, couples were classified into four groups based on the possible combinations of spouses' smoking status. The reference category was couples in which both partners were non-smokers (n=972). These couples were compared with couples in which the man but not the woman was a smoker (n=207), the woman but not the man was a smoker (n=114), and both partners were smokers (n=195).

As is evident from the figure, compared to the reference group, the odds of subsequent separation for couples in which only male partners were smokers were increased (OR=2.6, p<0.01). However, the effect of women's smoking status on separation was much stronger: couples in which women were smokers were over four times more likely to separate than non-smoking couples, with both odds ratios above 4 (p<0.001). The additive effect of male smoking status was minimal: whereas the odds ratio of separation for couples with only women smokers was 4.4, the odds ratio for couples in which both partners were smokers was 4.6. The results demonstrated that women's smoking status was more strongly associated with subsequent relationship dissolution. Further, the results demonstrated that the interaction effect evident for smoking status was not a consequence of the mismatch between partners' characteristics increasing incompatibility leading to greater risk of relationship dissolution. Rather, the interaction effect may represent effect compression or a ceiling effect.

Figure 1:   Percentage of couples separating over two years as a function of men's and women's smoking status
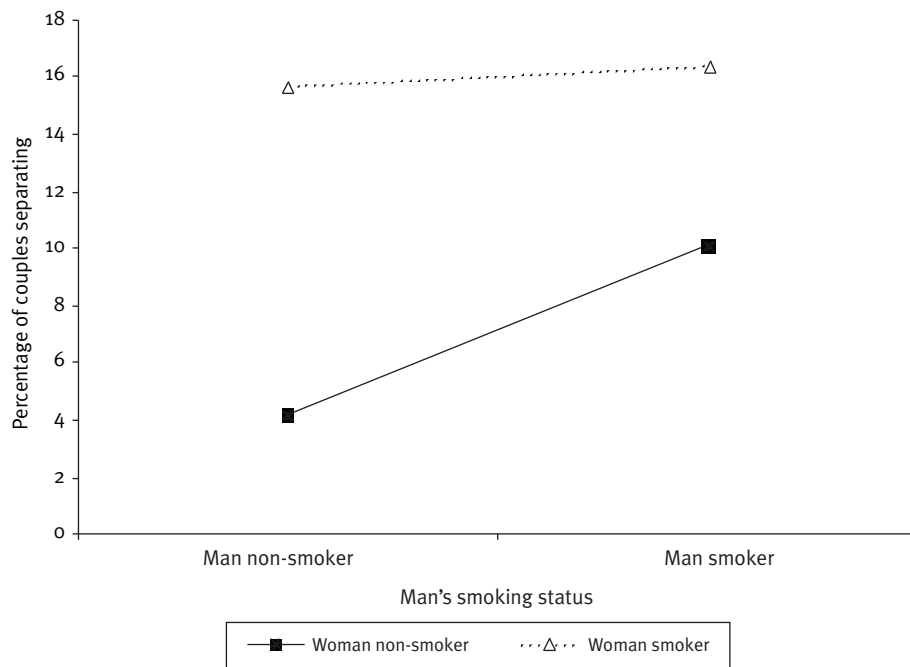
Figure 2:   Percentage of couples separating over two years as a function of the characteristics of men's and women's family of origin (parental separation)

Parental divorce: The interaction between the characteristics of the man's and woman's family of origin (considering the effect of parental divorce) on the rate of subsequent separation is presented in Figure 2. The figure shows that, compared to couples in which neither partner had experienced parental divorce, couples in which one partner reported parental separation had elevated rates of relationship dissolution and that this was similar regardless of gender of the partner experiencing parental divorce. While couples in which both partners experienced parental divorce had elevated rates of separation, the overall risk of separation in this group was less than what would be expected based on an additive combination of the two main effects. Again, the interaction effect for parental divorce seems to reflect a ceiling effect. Using couples in which neither partner experienced parental divorce as the reference category, the odds ratio for subsequent separation was 2.8 for couples in which only men had experienced parental separation, 2.5 for couples where only women experienced parental separation, and 3.5 for couples in which both partners had experienced parental separation. Bumpass, Martin and Sweet (1991) also found an unusual pattern of results when considering the effect of each partner's experience of parental divorce on rates of own separation. However, they found that it was men's but not women's or shared parental divorce that was associated with marital disruption.

Education level disparity: The interaction between spouses' level of educational attainment on subsequent relationship dissolution is presented in Figure 3. While there was some evidence of a general effect of educational level (that is, greater rates of relationship dissolution associated with lower levels of educational attainment), the figure clearly demonstrates greater levels of separation for one particular category of couples: rates of separation were strikingly elevated for couples in which women had a tertiary level of education and men had not completed secondary school. Although the overall number of couples in such circumstances was small (n=25), this striking effect warrants further consideration. It is, for example, consistent with theories that women's financial independence or adoption of a non-traditional gendered role are factors associated with marriage instability (see Hewitt, Baxter & Western 2005).

Figure 3:   Percentage of couples separating over two years as a function of the characteristics of men's and women's level of educational attainment
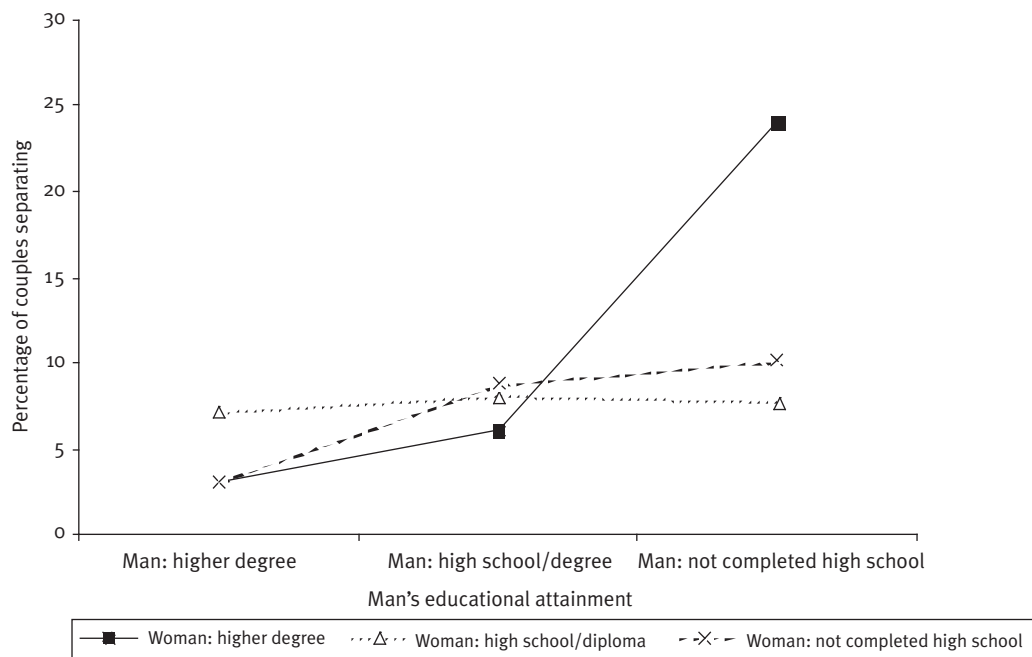
Other elements of the results are consistent with such an interpretation. The lowest rate of separation was found among couples where both partners reported tertiary qualifications (n=196), consistent with the hypothesized socioeconomic gradient in marital instability (Bradbury & Norris 2005b). However, the other group with a similarly low rate of separation was couples in which the man had a tertiary qualification and woman had not completed high school (n=32). In this case, disparity in educational attainment is associated with greater marital stability. The disparity evident for these couples complies with gendered stereotypes in which men are the breadwinners, and women have less financial independence. This overall pattern of results replicates the findings of Bumpass, Martin and Sweet (1991), who reported that educational disparity inconsistent with patriarchal and traditional roles was associated with greater marital instability.

This analysis of educational attainment provided the only example in which the specific combination of partners' characteristics (and more specifically, the inconsistency in partner characteristics) was associated with increased relationship instability. In all other circumstances, the interaction effects did not contribute significantly above the main effects or (in the previous two examples) were circumstances in which there may have been a threshold effect. That is, the presence of the characteristic among either partner was associated with relationship instability, but there was no evidence that the effect was greater when both partners reported the characteristic.

6.6   Multivariate model

The results reported in the previous section showed that a range of factors were associated with subsequent divorce/separation, including personal characteristics such as mental and physical health, and health behaviours such as smoking. However, many of these individual factors are likely to be intercorrelated and/or represent the effect of common underlying factors. In this section, therefore, we examine the various measures together in a multivariate model. This enables us to establish, having controlled for other characteristics, which measures are independent predictors of subsequent separation. As described earlier, we considered five distinct blocks of variables: family background, financial circumstances, relationship characteristics,

social circumstances, and personal characteristics (including health and health behaviours). We built the model sequentially, adding each block of variables in turn. The order of block entry reflects a broad conceptual framework.

The selection of factors to include in the models was based in part on the results of the previous set of analyses. We included interaction terms where the previous models showed that there were interactive effects of the characteristics of both members of a couple. Similarly, where the previous results suggested considerable similarity between both members of a couple, such that the inclusion of data from both members would eliminate the significance of both effects, we operationalised the measure in another way.

The results of the five incremental models are presented in Table 10 and we discuss the results of each in turn.

Table 10: Results from sequential logistic regression models, using odds ratios to represent the association between characteristics at the individual and couple level and subsequent separation

Characteristic	Level		Model 1	Model 2	Model 3	Model 4	Model 5
Family background							
Age	Individual	Men's age	0.98	1.00	0.99	1.00	0.99
		Women's age	0.99	0.99	1.01	1.01	1.02
Parental divorce	Individual	Men's parental divorce	3.02***	2.94***	2.93***	2.95***	2.88***
		Women's parental divorce	2.23**	2.05**	2.00*	2.00*	2.09*
	Couple	Interaction (both partners)	0.32*	0.34*	0.26*	0.25**	0.25*
Number of relationships	Individual	Men One—current (ref)					
		Two	2.18**	2.20**	1.82*	1.92*	1.82*
		Three or more	2.15*	1.89*	1.41	1.39	1.07
	Individual	Women One—current (ref)					
		Two	1.91*	1.65	1.10	1.08	1.16
		Three or more	2.32**	1.95*	1.05	1.10	0.96
Financial characteristics							
Labour force status	Individual	Men Employed (ref)					
		Unemployed		1.20	1.15	1.19	1.10
		Not in labour force		0.48	0.50	0.50	0.28*
	Individual	Women Employed (ref)					
		Unemployed		1.19	1.12	1.10	0.81
		Not in labour force		0.48	0.89	0.87	0.78
Reported hardship	Individual	Men No hardship (ref)					
		Less than 2 hardships		1.83	1.83	1.85	1.67
		2 or more hardships		1.91	1.60	1.50	1.18
	Individual	Women No hardship (ref)					
		Less than 2 hardships		0.80	0.70	0.72	0.71
		2 or more hardships		1.41	1.22	1.22	1.17
Income support receipt	Individual	Men Receiving income support		2.27*	2.26*	2.24*	1.86
	Individual	Women Receiving income support		0.62	0.71	0.74	0.76
Relationship characteristics							
Relationship satisfaction	Individual	Men Not satisfied			1.21	1.27	1.21
	Individual	Women Not satisfied			4.14***	4.31***	4.20***
Relationship status	Couple	Married, no cohabitation					
		Married, prior cohabitation			1.23	1.13	1.26
		Current de facto			2.79**	2.62*	2.90*
Relationship duration	Couple	Relationship ≥5 years (ref)					
		Relationship <5 years			0.74	0.71	0.64
No. of children	Couple	One (ref)					
		Two			1.00	1.04	1.13
		Three or more			0.89	0.98	1.10

Characteristic	Level			Model 1	Model 2	Model 3	Model 4	Model 5
Age of youngest child	Couple		Less than 5 years (ref)					
			Aged 5 years or greater			0.79	0.76	0.69
Stepchildren	Individual	Men	Stepchild(ren)			1.21	1.19	1.24
	Individual	Women	Stepchild(ren)			2.07	2.13	2.23
Social circumstances								
Educational attainment	Individual	Men	Tertiary degree (ref)					
			Secondary or diploma				0.91	0.85
			Not completed high school				0.74	0.56
	Individual	Women	Tertiary degree (ref)					
			Secondary or diploma				1.74	1.41
			Not completed high school				1.81	1.37
Education disparity	Couple		No disparity (ref)					
			Man low—woman high				10.20***	9.95***
			Man high—woman low				0.24	0.17
Personal characteristics								
Mental health	Individual	Men	Poor mental health					1.95[a]
	Individual	Women	Poor mental health					0.68
Physical health	Couple		Any poor physical functioning					1.81
Smoking	Couple		Both non-smokers (ref)					
			Only man smoker					1.77
			Only woman smoker					3.58***
			Both smokers					3.36***
Alcohol consumption	Individual	Men	Moderate (ref)					
			Abstainer					0.69
			Heavy drinker					0.71
	Individual	Women	Moderate (ref)					
			Abstainer					0.69
			Heavy drinker					0.38
Life satisfaction	Individual	Men	Not satisfied					0.88
	Individual	Women	Not satisfied					2.07[b]
Religiosity	Individual	Men	Low religiosity (ref)					
			Moderate					0.82
			High					1.16
	Individual	Women	Low religiosity (ref)					
			Moderate					1.54
			High					0.97

(a) $p=0.057$.
(b) $p=0.054$.
Note: *$p<0.05$; **$p<0.01$; ***$p<0.001$.

Family background factors block: In addition to age, the block of variables in Model 1 included the total number of marriage-like relationships (an individual-level variable assessed for both men and women) and the main effects of, and interaction between, each partner's experience of parental divorce. The results from Model 1 were broadly consistent with the univariate results, suggesting there was little commonality/overlap between these factors. Both men's and women's experiences of parental divorce were a significant predictor, more than doubling the odds of separation. The significant interaction term representing the combination of men's and women's experience of parental divorce suggests that, while couples in which both members had experienced parental divorce had elevated rates of subsequent separation, the rate was less than what would be expected based on additive risk associated with men and women separately. The results showed that couples in which either men or women reported multiple marriage-like relationships were also more likely to separate.

Financial characteristics block: Model 2 incorporated the block of measures assessing financial circumstances. This included three measures (labour force status, financial hardship, and income support receipt) that were assessed at the individual level (that is, measures for both men and women were included). The earlier results suggested that men's financial measures had stronger predictive power than women's measures and found that there was no evidence of interaction effects.

The inclusion of the financial characteristics block significantly improved the overall fit of the model ($\chi2$ of change in loglikelihood statistic=24.82, df=10, p<0.01). Within the new block of measures, only men's receipt of income support payments was significantly and independently associated with an increased risk of subsequent marital disruption (OR=2.27). These results suggest that men's income support receipt mediates the effects of labour force status and financial hardship evident in the univariate analyses. However, the inclusion of measures of financial circumstances did not substantially alter the specific results evident for the terms included in Model 1, with parental divorce and previous marriage-like relationships remaining significant predictors of relationship dissolution.

Relationship characteristics block: Model 3 included measures associated with the current relationship. There were two individual-level measures (relationship satisfaction and presence of stepchildren) and four couple-level measures (marital status [married without prior cohabitation, married with prior cohabitation, and de facto relationship], relationship duration, number of children, and age of youngest child). The inclusion of this block of variables significantly improved overall model fit ($\chi2$ of change in loglikelihood statistic=44.89, df=10, p<0.001).

The multivariate results showed that, similar to the univariate results, relationship status was significantly associated with subsequent separation. Those couples in de facto relationships were more likely to separate than those who were married. The only other independent predictor of relationship instability was women's relationship satisfaction. Those couples in which women reported that they were not satisfied with their relationship were over four times more likely to subsequently separate than those couples in which women were satisfied. The other measures significant in the univariate analyses (including presence of stepchildren and relationship duration) were not significant independent predictors of marital dissolution in this multivariate model.

The inclusion of this block of variables did somewhat reduce the magnitude of some of the terms in the previous model (for example, both parental divorce), but the overall pattern of results was fairly consistent across models.

Social circumstances block: Given the interaction that was evident between partners' educational attainment, this block of variables included measures of men's and women's educational attainment and a dummy-coded variable representing educational disparity. To operationalise educational disparity we defined three groups: couples in which men had much higher levels of educational attainment than women, couples in which women had much higher educational attainment than men, and couples in which partners had comparable levels of educational attainment (the reference category). Overall, the inclusion of this block of variables did not significantly improve overall model fit ($\chi2$ of change in loglikelihood statistic=11.70, df=6, p=0.069).

The results presented in Table 10 were consistent with the earlier results showing that couples in which women had much higher levels of educational attainment than their partners had much greater risk of separation/divorce. The main effects of men's and women's educational attainment were not significant. Once again, the results for the consistent elements of the model (that is, those terms included in the previous models) were not substantially altered by the inclusion of the block of variables related to social circumstances.

Personal characteristics block: The factors in the personal characteristics block included: poor mental health, poor physical functioning, smoking status, alcohol consumption, religiosity, and life satisfaction. The consideration of how these personal characteristics (particularly health and health behaviours) are related to subsequent marital dissolution is a key focus of this report. All but two of the variables were operationalised as individual-level measures, with variables representing both men's and women's characteristics included in the model. The previous analysis showed that men's and women's physical health was associated with relationship dissolution in univariate analyses (men marginally so), but that the inclusion of spouses' physical functioning added little to each model and reduced the contribution of each individual measure to non-significance. This pattern is consistent with the effect of poor physical functioning being associated with burden within the household. Therefore, we conceptualised physical functioning at the couple level. In addition, the earlier results demonstrated the importance of capturing the interaction between partners' smoking status and, therefore, the dummy-coded variables used in the interaction analysis were included in this multivariate model.

Considering the contribution of this block of personal characteristics, Model 5 was a significantly better fitting model than the previous model ($\chi 2$ of change in loglikelihood statistic=32.00, df=16, p<0.01). The results also showed that a number of personal characteristics were independent and significant predictors of subsequent separation. Smoking was a strong correlate of later separation, with the smoking status of women a particularly strong predictor (reflected in the significance of couples in which only women were smokers and couples in which women and their partners were smokers). Men's mental health remained marginally significant after controlling for all other characteristics: couples in which men reported mental health problems were almost twice as likely to separate than couples in which men did not report poor mental health. Finally, couples in which women reported dissatisfaction with life were also marginally significantly more likely to separate.

6.7   Full model

Having reached the culmination of the model-building process, the final multivariate model has drawn together all the variables examined in the five blocks: personal characteristics, family background, financial circumstances, social circumstances, and relationship characteristics. To recap, the results showed that, after controlling for other factors, the measures that remained significant independent predictors of separation were smoking status, parental divorce, educational disparity, marital status (de facto relationships), women's relationship dissatisfaction, men's labour force status, and men's relationship history. As just discussed, the measures of men's mental health and women's dissatisfaction with life were also marginally significant.

The significant effect of smoking status in the full model demonstrated that the effect of men's smoking status was no longer significant, while women's smoking status remained a strong correlate of future separation. Compared to couples in which neither partner smoked, couples where the woman was a smoker (whether with a smoking or non-smoking partner) were over three times more likely to separate. One interpretation would be that this supports the notion that women's smoking status provides a strong marker of social and economic disadvantage and/or experience of adversity. Alternatively, it may reflect personality or other unobserved characteristics of women associated with smoking.

The effect of parental divorce indicated that couples in which either men or women had experienced parental divorce were significantly more likely to separate than couples in which neither partner had experienced parental divorce. However, these effects were not additive and couples in which both partners experienced

parental divorce had lower risk of subsequent separation that would be anticipated based on the sum of the individual effects. Note that the actual rate of separation was somewhat elevated among this group (neither: 4.6 per cent separate; men-only parental divorce: 13.5 per cent; women-only: 11.7 per cent; both men and women: 15.6 per cent), but was less than the increased risk for men and women combined. This provides some indication of a threshold effect, in that the apparently adverse effects of a particular characteristic at the individual level were similar regardless of whether experienced by men or women, or by one of both spouses.

Other evidence of an interaction between partners' characteristics was evident when educational disparity was considered. Consistent with the results reported earlier, the results in the full model continued to demonstrate that couples in which the woman reported tertiary qualifications but her partner had not completed secondary school were much more likely to separate compared to couples with consistent levels of educational attainment (odds ratio over 10 in the full model). Possible reasons for this effect were canvassed earlier, including suggestions that differences in educational attainment in this direction may reflect financial means and independence, or divergent attitudes and values.

As discussed in the theoretical section, we had expected to find an association between relationship dissatisfaction and marital stability (Karney & Bradbury 1995). This was one of the strongest predictors of subsequent separation/divorce in the full model. It is interesting that, in the earlier steps of model building, we found that the effect of men's relationship dissatisfaction was a weaker predictor of subsequent separation and was redundant when women's dissatisfaction was also considered. This indicates that women's views of the relationship seem to be the more important factor in predicting instability. This is consistent with evidence that women are more commonly the instigator of separation, perhaps because they are more oriented towards the interpersonal aspects of the relationship (Wolcott & Hughes 1999).

Other results in the final model were consistent with the previous literature. Couples in de facto relationships were more likely to separate than those who were married (with or without prior cohabitation; consider de Vaus, Qu & Western 2003). There were some effects that differed from previously established findings. For example, we found marital instability was greater for those couples in which male respondents reported previous marriage-like relationships, whereas Zimmer (2001) found that couples in which women reported previous marriages had greater rates of separation. Some results may be spurious, with no obvious explanation. For example, couples in which men reported not being in the labour force were significantly less likely to separate (though this effect was only significant in multivariate analysis and thus reflects the situation when all other factors examined in the model are held constant).

Finally, the marginally significant effects of men's mental health and women's life satisfaction are interesting. Both measures can be considered markers of a general construct of wellbeing, perhaps reflecting gender differences in the presentation and/or reporting of symptoms. That is, the results may be tapping the same underlying construct. It may be that this lack of wellbeing reflects the distress associated with the conflict, the process of separation, and/or broader adversity. When we repeated the analysis excluding the measure of the woman's dissatisfaction with the relationship, both the effect of the man's mental health problems (OR=2.18, p<0.05) and the woman's dissatisfaction with life (OR=2.67, p<0.05) were significant. These findings were consistent with the theoretical model developed by Karney and Bradbury (1995) in which the effects of enduring characteristics, interpersonal interactions and external stressors on marital stability are mediated through marital quality/satisfaction (which we operationalised as 'women's relationship dissatisfaction'). This indicates that relationship satisfaction could be considered an intermediate outcome measure, which also serves as a predictor of marital stability.

To conclude, we found consistent and strong evidence that women's smoking status, women's relationship dissatisfaction, either partner's experience of parental divorce, and educational disparity (with women having much higher levels of educational attainment than their partner) were independent predictors of subsequent separation. In terms of the broader aims of this project, we did therefore find evidence of the importance of personal characteristics and couple-level interactive effects in predicting relationship dissolution.

7   Discussion and policy implications

In this final section, we briefly review the analysis conducted and the main findings. We discuss the limitations of the research and outline future directions.

7.1   Reviewing the research methods and findings

Overall, the analyses reported in this paper sought to identify factors associated with marital instability using a prospective longitudinal design. The research was guided by the previous literature and we expected our research to confirm that the factors previously identified as predictive of relationship instability would demonstrate a similar pattern using the HILDA survey data. In general, this was what we found, with evidence of the predictive power of parental divorce, cohabitation prior to marriage, being in a de facto relationship, relationship dissatisfaction, low income or social status, and receipt of welfare payments.

The main innovation in terms of content within this study was the focus on health and health behaviours. We considered whether mental health problems, impaired physical functioning, hazardous levels of alcohol consumption, and smoking were associated with later divorce or separation. These characteristics (apart from mental health) have been rarely considered within the literature on divorce/marital disruption, and the findings from the previous literature have been mixed. Our analysis showed that a number of these measures were important factors.

Our analysis was also unique in that it considered data from both spouses. This proved important as a number of characteristics demonstrated gender-specific effects (for example, life satisfaction, smoking). Further, there was less evidence than expected of an effect of homogamy or of interactions between spouses' characteristics on relationship stability. The most striking example of the mismatch of partners' characteristics being associated with increased marital instability was for educational attainment, producing a pattern of results consistent with one previously reported paper in the international literature (Bumpass, Martin & Sweet 1991). There was also some evidence of interactions that reflected threshold effects of particular characteristics on marital stability (for example, parental divorce, smoking, physical health). In the case of physical health, the overlap between the effect for men and women was such that neither individual effect remained significant in the presence of the other. It may be, for example, that the effect of poor physical functioning on marital instability operates through the additional burden placed on the healthy spouse, regardless of gender.

After Dear, Henderson and Korten (2002), our stepped series of analyses initially examined the univariate associations between each of the characteristics being considered (for each partner separately) and subsequent marital disruption. This enabled assessment of whether there was a significant relationship between each variable and marital instability. This step was purely descriptive, and had no implications for interpreting causality. Secondly, we modelled the characteristics of both spouses simultaneously to identify whether the effect was present in both members of a couple, whether there was a gender-specific presentation of the effect and/or whether there were interactive effects. Finally, the multivariate analyses involved the combination of different characteristics into blocks of similar variables which were added as we built the full model.

The initial analyses confirmed the association between many characteristics and marital instability using an Australian sample. At the couple level, the simple univariate results showed marital stability was associated with physical health, mental health, smoking behaviour, relationship dissatisfaction, life dissatisfaction, receipt of income support, labour force status, financial hardship, educational attainment, religiosity, previous marriage-like relationships, parental divorce, cohabitation prior to marriage, being in a de facto relationship, and short relationship duration. We also found significant spousal concordance for these characteristics, demonstrating the importance of considering the effects for men and women separately and prompting questions about how the characteristics of spouses combine to influence relationship stability.

The most surprising effect across the analyses was the relationship between smoking status and marital instability. There has been little consideration of this effect in the previous literature. The final multivariate model showed that couples in which women were smokers (regardless of the male partner's smoking status) were at increased risk of divorce or separation. One hypothesis is that the measure of smoking status captures unobserved characteristics of those at risk of relationship dissolution (for example, personality). We consider it likely that smoking reflects disadvantage and adversity. Smoking, particularly among women, is a marker of material, social, cultural and regional disadvantage (Graham et al. 2006; Nystedt 2006; Rahkonen, Laaksonen & Karvonen 2005). Smoking may be normative behaviour within disadvantaged groups, and/or be a response to severe and insurmountable stressors from a variety of sources: economic, relationship and care giving. Graham et al. (2006) examined data on the socioeconomic life course of women. Whereas the traditional focus of analysis of social status is on formal measures such as natal family circumstances (often operationalised as father's occupation), one's own educational experience and opportunities, and employment achievements in adulthood, Graham et al. argued that understanding women's life chances and living standards also requires consideration of domestic socioeconomic life course factors. These are tied to the informal institutions of home and family, and reflect partnership and parenthood trajectories.

We also found a very strong effect of one type of educational disparity on marital instability. Compared to couples in which partners had similar levels of educational qualifications, those couples in which women reported tertiary qualifications and men reported not completing high school had a ten-fold greater risk of divorce/separation. This may be interpreted as a consequence of the woman's greater financial independence (whether actual or potential) and, thus, in the event of relationship difficulties, their capacity to support themselves outside of the marriage (Bumpass, Martin & Sweet 1991). Thus, women's tertiary qualifications reduce what Levinger (1976) would characterise as a significant barrier to leaving the relationship. However, marital instability is not elevated in couples where both partners have tertiary qualifications. Therefore, the effects for couples in which women have much higher levels of education than their partners may indicate that these couples experience greater conflict or dissatisfaction within the relationship as a consequence of differences in attitudes, values or background (rather than simply lesser barriers to leaving). The greater stability of couples in which the man has higher educational qualifications than the woman also suggests that the elevated levels of relationship instability are associated with the fact that these couples are not fulfilling the traditional gendered roles within marriage.

The analysis of health and health behaviours was a focus of this project. Interestingly, we found no evidence of an association between alcohol consumption (at the couple level, for either spouse or concordance or divergence in consumption between spouses) and relationship instability. The effect of physical functioning was present in the univariate analyses, though somewhat weaker than anticipated, and was not apparent in the multivariate model. Mental health (and life satisfaction, which we also considered an alternative measure of the same general construct) was strongly associated with separation/divorce, though the effects were significantly attenuated in the full model. Further analysis suggested that the effects on marital stability of men's poor mental health and women's dissatisfaction with life were mediated through quality of relationship (assessed by women's relationship satisfaction). This reinforces the importance of considering broader social factors, such as the relationship between spouses and relationship satisfaction, as potential determinants of health and wellbeing.

Parental divorce was also a strong predictor of subsequent divorce/separation (see also Amato 2000). However, the multivariate results suggested that a threshold effect also operated for this characteristic. Couples in which only men and, to a somewhat lesser extent, couples in which only women, had experienced parental divorce had elevated rates of marital disruption. The significant interaction effect indicated that couples in which both partners had experienced parental divorce had a comparable risk of divorce: that is, a level of risk that was less than the additive contribution of each of the separate effects evident for men and women. This suggests a ceiling on the effect. The presence of parental divorce increases a couple's risk, but there was not a dose-response (greater exposure did not further increase risk).

In terms of policy implications, the results provide evidence to better understand the factors that may lead to marital separation. This can be a basis for the development of policies to strengthen relationships and families, and (ultimately) provide a more secure and positive environment to promote the development of children. To the extent that these factors are amenable to intervention (for example, financial circumstances and financial management skills), the findings can inform the development of programs of assistance (for example, income support policy, skills training). However, given the concerns about causal inference discussed throughout this report, we would advocate for a stronger evidence base and suggest further research be conducted in this area (see Section 7.2). The current research findings do provide evidence that could help improve the targeting of services and assistance—that is, to improve the identification of families at greater risk of separation and who may benefit from targeted early intervention. It can also provide evidence on which to tailor the types of support provided to at-risk families (that is, ensuring the type and manner of service delivery matches the needs and circumstances of the families/couples). These uses of the research findings are not contingent on causality. The results from this project also provide an indication of the types of information that may be particularly relevant to collect in a service delivery context (that is, the strongest risk factors for subsequent relationship dissolution).

The research highlights the importance of context (that is, the interaction and combination of characteristics at the couple level) and the need to move beyond a focus on the individual. This should also be the focus of policy development and service delivery responses. Our consideration and demonstration of the importance of health-related measures demonstrates the interrelationships and nexus between social policy, public health and health policy. Thus, within the domain of family and relationship services, the relevance of cross-portfolio approaches with multifaceted aims and outcomes is emphasised.

7.2 Limitations and future directions

Building on the current investigation, future research needs to focus on specific factors and build more sophisticated models that address mediation and moderation hypotheses. Greater emphasis also needs to be given to the identification and development of policy-relevant responses.

There were limitations with the analytic methods used. Our analysis of the longitudinal data was relatively modest and did not model or take account of the dynamic nature of the data. In part, this decision was driven by data limitations (the three waves of data provide only a small number of couples experiencing separation and limited opportunity to model change in circumstances preceding and following change in marital status).

We found evidence that the effects of mental health/wellbeing were mediated through other characteristics (relationship satisfaction). Intuitively, this is consistent with the vulnerability–stress–adaptation model of Karney and Bradbury (1995). Future research should explicitly build and test models such as Karney and Bradbury's, differentiating between underlying and mediating factors, and incorporating time not only as a link between prior characteristics and later outcomes, but also in a dynamic sense to model characteristics changing and adapting. Again, data limitations precluded the application of structural models at this time.

Another obvious response to the inability to differentiate selection and causation effects in the data is to increase the time between the measurement of predictors and the outcomes measures. Again, this is a limitation of the current data.

There were also measurement limitations. A number of the measures (for example, relationship dissatisfaction) were based on single items, leading to some uncertainty about psychometric properties, reliability and validity.

A way forward is to focus on increasing our understanding of some of the specific associations and pathways to marital instability. In our opinion, identification of the association between (women's) smoking status and marital instability is both the most unique contribution of this project, and potentially the most important. This warrants further investigation. Progress can be achieved by assessing the extent to which the relationship between smoking and separation/divorce can be explained by a more extensive range of

socioeconomic measures and modelling dynamic and temporal relationships (how is change in smoking status related to change in marital status?). We do not propose a causal relationship. Rather we hypothesise that smoking status may be particularly useful and applicable within the policy context as a risk marker, and could be considered in screening/assessment processes. Further consideration of smoking status, social position/trajectory and marital instability may be a worthwhile focus for further research in this area.

Endnotes

1. Note that there were a small number of couples that separated and reconciled across the three waves. These couples have been included in our 'separated' category.

2. For discussion of the reporting of financial hardship with couples see Breunig et al. 2005.

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