



Working for the well-being of couples and their families

## **Biographical determinants of marital quality**

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## **1.0 Introduction**

### **1.1 Background to the present study**

There have been a large number of studies examining the links between divorce and a multitude of factors seen as possible determinants or predictors of divorce. However there have been relatively few longitudinal studies examining marital quality and much of the work on marital quality has been conducted in the United States.

The present study aimed to build on this previous work by examining the relationship between a wide range of factors that reliably predict divorce and using them to look at marital quality in a large representative British sample (the National Child Development Study).

The overall purpose of the present project was therefore to determine what factors are the principal biographic determinants of marital quality among a sample of British respondents. Although marital quality is the principal emphasis of the study, the term is also applied to de facto marriages (i.e. people in cohabiting relationships) as well in order to explore any differences between these two situations.

#### **Research objectives**

The main objectives of the present project were:

- To synthesise the findings of the literature on marital quality and use them to specify a testable model.
- To establish the nature and strength of the effects of biographic factors on the quality of marriage and marriage-like relationships.
- To explore the relationships between various factors found to be predictive of marital quality and, where possible, to suggest explanations for these influences.
- To examine the implications of any findings for policies and services designed to eliminate or offset the effects of factors known to affect marital quality adversely.

#### **Structure of the report**

This report starts with an overview of the dataset obtained from the National Child Development Study (NCDS) and the history of data collection. An overview of the literature relating to marital quality and predicting marital quality and stability is then provided. This information is then consolidated into a model of marital quality which is to be evaluated using the NCDS dataset. The analytical strategy and key method are then described before the findings from the various analyses are reported. The key findings are then explicated in the conclusion.

### **1.2 Background to the National Child Development Study (NCDS)**

The National Child Development Study (NCDS) is a large scale longitudinal study of a nationally representative sample. The sample comprises all the 17,000 babies born in the week 3-9 March 1958. Immigrants to Britain born in the same period have been added, where possible.

Following the initial data collection at birth additional surveys were conducted at ages 7, 11, 16, 23 and 33 and exam result details were collected in 1978. An overview of the data collection points and the areas covered by the survey appear in Table 1.1.

The project originally focused on the circumstances and outcomes of birth but has been expanded at each subsequent survey to examine educational, physical, economic and social development. In addition to the cohort members themselves, information has been collected from parents, teachers and school medical officers.

The fifth sweep in 1991 was significantly expanded to cover family formation histories, partnership relations and parenting behaviour and values. Data were also collected from spouses or partners and from a one in three sample from children and their mother. This data collection point was the main source of information for the present study. A more detailed summary of the survey instruments used and response rates achieved appears in Appendix 1.

Table 1.1 Information collected by the NCDS

<b>Sweep</b>	<b>Date</b>	<b>Age</b>	<b>Sections</b>
Perinatal Mortality Study (PMS)	1958	Birth	Perinatal Mortality Study
NCDS1	1965	7	Parental, schools and medical questionnaire; tests completed by subjects
NCDS2	1969	11	Parental, schools and medical questionnaire; tests completed by subjects
NCDS3	1974	16	Parental, schools, medical and individual questionnaire; tests completed by subjects
Exams	1978	20	Derived variables
NCDS4	1981	23	Interview Questionnaire; 1971 Census Data; 1981 Census Data; Derived Variables
NCDS5 <sup>1</sup>	1991	33	Contact and Outcome Sheet; What do you think? Questionnaire; Your life since 1974 Questionnaire; Interview Questionnaire; Your life since 1974 Questionnaire (Partner); Mother Interview Questionnaire; Your Child Questionnaire; Child Assessments Questionnaire

<sup>1</sup> Further details of sections of the NCDS5 are provided in Appendix 1.

## **2.0 Literature review**

A large amount of published material has been devoted to the relationships between a plethora of factors and measures of marital/relationship quality and stability. This review attempts to provide an overview of the main influences and themes pertinent to this study.

### **2.1 What is marital quality?**

Marital quality is a dynamic concept, as the nature and quality of people's relationships can change over time (Larson and Holman, 1994). This raises the possibility of identifying factors that could make a difference to the quality of a relationship, although such connections are likely to be complex, involving the interactions of many variables.

There are a number of ways of conceptualising the notion of the quality of a relationship. Glenn (1998) identifies two major approaches to the measurement of relationship quality; looking at individual feelings of the people in a relationship (e.g. evaluative judgements of happiness or satisfaction) and looking at the relationship itself (examining patterns of interaction, such as the amount and type of conflict).

Many terms have been used to describe marital quality, such as adjustment, satisfaction, happiness, integration and commitment (Lewis and Spanier, 1979). However, there has been little consistency or agreement in the meaning applied to the terms, partly due to lack of theory about what marital quality actually is (Glenn, 1990) and this makes comparisons between studies difficult (Johnson et al, 1986). Also, interpreting the results of scales beyond a simple classification into happy or unhappy marriages becomes problematic without a clear theory (Fincham, 1997).

There is also a high degree of overlap between the different measures; they are all highly intercorrelated making it unlikely that they all measure different things (Fincham and Bradbury, 1987). Johnson et al (1986) suggest that the different measurements essentially tap only two distinct components of marital quality; positive and negative aspects. These two main dimensions generally reflect more distinct patterns of variation by gender and over time (Fincham, 1997). Observations of conflictual marital interactions have found that unhappily married couples are more negative and less positive than happily married ones (Gottman, 1994). It should therefore be noted that the determinants of marital dissatisfaction may not simply be the opposite of those leading to satisfaction; marital quality is defined by the relative presence and absence of positive and negative factors (Bradbury et al, 2000).

Global evaluation measures are often used as they are more amenable to interpretation and avoid the confusion of marital quality with its determinants (such as conflict) (Fincham and Bradbury, 1987). Scales which involve the summing of items to form an overall score have been criticised for assuming that the relationships between the items is sufficiently understood (Glenn, 1990). In a review of longitudinal studies, Karney and Bradbury (1997) found few differences between global and omnibus measures of marital quality and suggest that the actual measurements may be less important than their pattern of administration over time.

There are a number of more practical difficulties inherent in measuring marital quality. For example, measures are generally collected from only one partner, but may be used to represent the quality of a relationship (Booth and Edwards, 1989). Also, the collection of measurements of relationship quality may be subject to considerable social desirability response bias (Glenn and Kramer, 1987) and global measures tend to be significantly skewed towards a positive evaluation (Glenn, 1990).

Gottman (1994) argues that as people are biased to construct a consistent account of their marriages, they distort the many complex patterns of interaction into simple positive or negative self-reported measures. Observation studies have found that a number of distinct patterns of interaction (e.g. less positivity during conflict, greater reciprocity of negativity) discriminate between satisfied and dissatisfied couples.

As studies tend to only include intact marriages, the fact that unhappy marriages will tend to be more likely to result in divorce will serve to reduce any effects relating to marital quality (Glenn, 1990). Marital quality is a strong predictor of marital stability, although there are a number of important mediating variables to account for the reasons why one couple may separate while another may not, given the same level of marital quality (Lewis and Spanier, 1979). Much of the research has looked at factors that relate to divorce. Although expected to be highly similar, this article will review the main findings on factors related to marital or relationship quality.

## **2.2 Personal characteristics**

The following sections concern studies that have identified links between factors relating to the individual and marital or relationship quality.

### **2.2.1 Gender**

A number of differences have been found between men and women's views of the quality of their relationships. For example, Locksley (1980) reports that women express more dissatisfaction and frustration with the relationship, are more likely to characterise their relationship as being like two separate people than a couple, are more upset by marital conflict, are more likely to feel misunderstood and that their spouse should express more of their thoughts and feelings. Heaton and Blake (1999) argue that as men and women have different roles and see aspects of relationships (such as the division of labour, parenting and sexual intimacy) in different ways, they evaluate them differently. They also suggest that wives' perceptions of relationship quality will be more accurate as they are more focused on and place a greater emphasis on the relationship.

Such differences have prompted some authors to suggest that separate models of marital satisfaction may be needed as the sexes have different views of what matters in marriage (Wilkie et al, 1998). However, it is common to find that ratings of marital quality are closely related. For example, Karney and Bradbury (1997) found that husbands' and wives' marital satisfaction scores were correlated and the trajectories of their changes in marital satisfaction did not differ.

### 2.2.2 Personality factors

There has been relatively little research on the effects of personality factors on marital quality, despite suggestions that these factors may be more important than, for example, demographic factors (Russell and Wells, 1994). Part of the difficulty hinges on the debate concerning whether personality traits are intrinsically stable or whether they can be influenced by internal or external changes. Ratings of personal happiness and subjective well-being have been found to be very consistent traits and the strong association between personal and marital happiness suggests that ratings of marital quality may have similar personality determinants (Johnson and Booth, 1998).

Higher levels of neuroticism, or negative affectivity, were associated with lower levels of initial satisfaction, but not with rates of change (Karney and Bradbury, 1997). A person's neuroticism may also have a negative impact on the marital quality experienced by their partner (Russell and Wells, 1994). Caughlin et al (2000) argue that trait anxiety affects marital satisfaction through communication processes such as increased negativity in interactions. Attachment insecurity is also associated with the experience of high levels of negative affect, which appears to be both directly and indirectly related to poorer marital satisfaction (Davila et al, 1998).

Kelly and Conley (1987) found that men who were more dissatisfied with their relationships also tended to have lower social extraversion and agreeableness. They suggest that disrupted patterns of communication and behaviour exchange in disturbed couples may be due to personality characteristics. Bouchard et al (1999) report that women high in agreeableness and men high in openness, agreeableness and conscientiousness were more maritally adjusted.

The personality trait of hostility is characterised by cynical and mistrustful attitudes and a propensity to experience anger and act aggressively. Newton and Kiecolt-Glaser (1995) found that higher hostility was associated with greater decrements in husbands' and wives' marital quality during the first few years of marriage. They propose that conflictive interactions are central to declining satisfaction in early marriage.

Personality traits themselves may not be as important in predicting marital quality as personality congruence between partners. Richard et al (1990) found that similarity in partners' personalities is a major factor in achieving and maintaining marital satisfaction. Kurdek (1991) suggests that discrepancies in personality lead to inter-spousal conflict and eventual marital distress. The ability to communicate well, negotiate and resolve conflict amicably are stable characteristics that an individual brings to the marriage (Johnson and Booth, 1998).

### 2.2.3 Mental health

Marital happiness is very strongly linked to mental health and the effects are not substantially reduced by controlling for income, education, age, race and childhood experiences (Gove et al, 1983).

For example, Kurdek (1998) reports that high levels of depressive symptoms at marriage are linked to low initial marital quality and that increases in depression are accompanied by decreases in marital quality. Dehle and

Weiss (1998) found that lower initial marital quality predicted greater subsequent depression (especially for women) and also initially higher depression scores predicted greater declines in marital quality three months later. Anxiety disorders, such as phobias, panic disorders and generalised anxiety disorder have also been found to be associated with poorer marital quality (McLeod, 1994).

The precise processes by which marital relationships affect mental health is unclear although marital interactions may be disrupted in the presence of one or both partner's mental health issues. Kurdek (1991) found that a high value on attachment, many intrinsic motives for being in a relationship, high satisfaction with social support and infrequent psychological distress were all predictors of positive marital quality.

Positive sources of well-being within a relationship such as support may also be the most critical determinants of distress when they are negative, as in conflict. For example, Horwitz et al (1997) report that people with more supportive partners report less depression and people with more problematic partners report more depression.

#### 2.2.4 Physical health

Burman and Margolin (1992) review findings that show a reciprocal relationship between marital satisfaction and health problems, although particular effects depend on the type and characteristics of the illness. Effects may be mediated by a range of other factors as health factors affect finances, division of responsibilities, mutual activities and views of each other.

A decline in health may be associated with a reduction in marital quality, which is influenced by a range of factors such as reduced income, change in division of labour, fewer joint activities or problematic behaviour (Booth and Johnson, 1994). The effects on marital quality may also be stronger for the partner who is not ill and women's marital quality may be more sensitive to spouse's chronic illness.

#### 2.2.5 Childhood and parenting

Abuse or poor parenting may affect relationship functioning through the mediation of other factors such as marital conflict. The effects of early parenting quality and childhood abuse also appear to depend on gender, severity of abuse and dimension of relationship quality (Belt and Abidin, 1996). For example, Kelly and Conley (1987) report that aspects of the early social environment such as psychosocial instability and emotional closeness were much stronger predictors of marital satisfaction for women.

#### 2.2.6 Socio-economic status and employment

Absolute socio-economic circumstances may be less important in predicting marital quality than expectations and perceptions of adequacy. Thus, satisfaction with lifestyle, job and socio-economic status leads to greater levels of marital satisfaction (Lewis and Spanier, 1979).

Larson et al (1994) found that job insecurity stress was negatively related to a number of measures of marital functioning and propose that work related anxiety spills over into family life. Conger et al (1990) found that economic

strain had a negative but indirect effect on marital quality by promoting negative behaviours (e.g. hostility) and curtailing positive behaviours (e.g. support). The effects of economic conditions may therefore operate through marital interaction factors such as tension and conflict and the effects will depend on coping resources and social support (Voydanoff, 1990).

Unemployment is not strongly related to marital satisfaction but is associated with depression and stressful relations, which are predictive of poor marital quality (Kinnunen and Pulkkinen, 1998).

The effects of employment stress can also operate by crossing over from one spouse to the other. For example, Bolger et al (1989) found links between the work stresses (e.g. overloads or arguments) of one spouse and the home stresses of the other spouse.

### **2.2.7 Previous relationships**

Premarital romantic and sexual relationships have been found to be negative predictors of marital satisfaction (e.g. Kelly and Conley, 1987). Premarital cohabitation with someone other than the present spouse is negatively associated with marital satisfaction and stability (Stets, 1993). Marital quality has been found to be slightly greater in first marriages than subsequent ones (Glenn, 1990).

Explanations for these effects have included that breaking up may produce a temporary view of relationships and that past issues may remain unresolved in subsequent relationships (Stets, 1993).

### **2.2.8 Attitudes towards marriage and divorce**

Amato and Rogers (1999) investigated the association between attitudes toward divorce and marital quality. They suggest the possibilities that tolerance of divorce weakens the barriers to leaving a marriage, attitudes towards marriage affects motivation to invest in it and that unpleasant dissonance can result if spousal attitudes are divergent. Changes in attitudes can also affect marital quality and vice versa; for example, people tend to hold more positive attitudes to divorce following a separation.

## **2.3 Relationship factors**

### **2.3.1 Duration of marriage**

The finding that marital quality declines over time is common (e.g. Stets, 1993). Most research has concentrated on the early years of marriage. For example, Karney and Bradbury (1997) found that mean marital satisfaction scores decreased and variability increased for both spouses over the first four years of marriage. Early claims that marriages tend to improve at a later point were not supported by more recent research; comparisons of studies suggests that marital quality declines rapidly at first and then tails off (Glenn, 1998). Kurdek (1998) reports that couples who eventually separated showed a fairly rapid change in marital quality and both spouses had a similar trajectory of change.

Although marital quality tends to decline over time, the form of this descent is of a developmental change which is remarkably stable. Johnson et al (1992)

report that couples' marital quality tend to remain the same relative to others in the population and this stability is unaffected by gender or marital duration.

The mechanisms for these changes are not understood and the causal factors of marital stability and dissatisfaction may also be different in early and mature marriages (Kelly and Conley, 1987). Some suggested explanations include the difficulties of adapting to the challenges of new roles, establishing routines and avoiding conflict (Kurdek, 1998). However, significant changes would be expected to overcome early happiness and optimism and the social, moral and economic pressures to resist change (Karney and Bradbury, 1997).

### 2.3.2 Interactions

The character of the interactions between couples may be more important for marital quality than social or personal traits (Johnson and Booth, 1998). For example, Lewis and Spanier (1979) report that positive regard, effective communication, absence of role conflict and satisfaction of emotional gratification lead to greater marital quality.

Gottman et al (1998) explored the marital interaction processes that are predictive of marital happiness and stability. The main problems were found to lie in destructive patterns of conflict resolution and in the escalation of negativity. Only in stable and happy marriages was there positive affect in conflict, acting to de-escalate negativity. Karney and Bradbury (1997) found that total negativity scores for couples rather than individuals were correlated with marital satisfaction and that husbands' negativity predicted more rapid declines in wives' satisfaction. Bradbury et al (2000) report studies that suggest a cyclical pattern of increased demands from one partner and increased avoidance by the other leads to a decline in marital satisfaction.

Patterns of interaction that correlate with concurrent satisfaction may not be predictive of satisfaction in the long term (Gottman and Krokoff, 1989). Thus, for example, the confrontation of disagreement may be functional for marriage in a longitudinal sense so long as certain behaviours are not invoked; avoiding conflict can be detrimental in the long term.

### 2.3.3 Premarital cohabitation

Cohabitation before marriage is negatively associated with marital quality (Glenn, 1990). However, it is unclear whether it is the fact of living together or the type of people who tend to live together before marriage that is responsible for this effect.

DeMaris and Leslie (1984) found persistent negative correlations between premarital cohabitation and marital satisfaction even after accounting for other factors such as the length of the relationship and commitment. This would suggest that the tendency to cohabit before marriage may result from individual characteristics such as less conventional attitudes. Berrington and Diamond (1999) also suggest a selection effect and found that premarital cohabitators are more likely to have less traditional attitudes towards marriage, have experienced parental separation, have previous partners and premarital conceptions.

#### 2.3.4 Presence of children

Childless individuals report a higher level of marital satisfaction than people with children (Glenn and McLanahan, 1982) and show a slower decline in marital quality (Kurdek, 1991). These effects have been found to be modest but reliable (Belsky et al, 1985) although some of the effect is likely to be due to people with children being more likely to remain in marriages, even if they are unhappy (Glenn and McLanahan, 1982). Also, how children affect the quality of marriage through pregnancy and early infancy varies widely across couples and so interactional and parenting styles may be more important in determining the effects of childbirth on marital quality (Bradbury et al, 2000).

Childless couples may be better adjusted because children can interfere with marital companionship (e.g. time, affection and attention) (Glenn and McLanahan, 1982). Also, following childbirth, the marital relationship appears to become more focused on instrumental functions and less on emotional expression, especially for wives (Belsky et al, 1985).

The birth of a baby is significantly related to increases in perceived marital discord (Rogers, 1999). Belsky et al (1983) found modest but consistent unfavourable declines on a variety of measures of relationship functioning and that wives' marital adjustment was more sensitive to the effects of a new baby, presumably due to the greater burdens placed on mothers. Parenthood requires large role transitions and commitments and the strain this creates can have an important influence on marital quality (Miller, 1976). How family work is divided may also be important, as traditionalism may have symbolic and psychological meaning for affective evaluations of the quality of marriage (Grote et al, 1996). The general lack of control over timing and number of children may also contribute to the negative effects (Glenn and McLanahan, 1982).

Marriages involving premarital pregnancy or stepchildren show the greatest decline in marital quality, possibly due to the interference with the completion of vocational and psychological roles (Kurdek, 1991). The presence of step children also appears to be an important influence on the quality of remarriages (Glenn, 1990).

#### 2.3.5 Division of labour

Disagreement over household division of labour is a cause of dissatisfaction. Wilkie et al (1998) found that husbands with more conventional attitudes may report lower levels of satisfaction when their wives are employed. Perceptions of fairness appear to mediate the effects of division of labour preferences and role preferences on marital satisfaction as, for example, a partner undervaluing your contributions decreases marital satisfaction.

Marital satisfaction will also be influenced by role expectations in the context of social class. For example, in lower classes, the woman may work out of necessity; highly educated women will expect to work. Therefore, it does not appear to be employment per se that is important for marital quality but the extent to which family experiences accommodate employment (Houseknecht and Macke, 1981).

### 2.3.6 Homogamy

Craddock (1991) reports that attitudinal homogamy (e.g. in relation to religious orientation and marital role) is related to couple satisfaction on a range of measures. Homogamy of social characteristics such as race, religious affiliation, age, education and social class may be more important to the prediction of marital quality than the actual factors themselves. Lewis and Spanier (1979) argue that the greater the homogamy, the more accurate the prediction of high marital quality is likely to be.

### 2.3.7 Partner's marital quality

Husbands' and wives' marital quality have been found to be significantly and positively correlated at each assessment occasion (Newton and Kiecolt-Glaser, 1995). Russell and Wells (1994) found that the strongest effect on marital quality was the partner's marital quality, suggesting that factors affecting one partner's marital quality will also therefore have a considerable effect on the other.

## 2.4 Factors external to the relationship

### 2.4.1 Parents' characteristics

Marital quality has often been found to be transmitted across generations (e.g. Larson and Holman, 1994). One explanation proposed for this fact is that children who are exposed to poor quality marriages are deprived of appropriate role models of relationship functioning and acquire poorer social skills (Amato & Booth, 1997) or they may acquire maladaptive responses to conflict (Feeney, 1999a). Lewis and Spanier (1979) report that the greater the individual's exposure to adequate role models for marital functioning, the higher the marital quality. Booth & Edwards (1989) report that children of unhappy marriages have greater marital instability, more disagreements and behavioural problems, are less happy in their marriages and have less interaction with their spouses.

Parental divorce is associated with lower marital quality among married offspring (Amato and Booth, 1997), although this appears to be a weaker influence. Parental divorce is positively related to marital problems (Frommer and O'Shea, 1973) and marital instability, marital disagreements and marital behavioural problems and women are more adversely affected by parental divorce than men (Booth and Edwards, 1989). Adult children of divorce are more likely to fear their marriage may be in trouble (regardless of their rating of marital happiness) and to escalate conflict and reduce communication (Webster et al, 1995). As with parental marital quality, explanations have been offered in terms of experience of high conflict marriages and disrupted parenting producing poor interpersonal skills through lack of appropriate models and the development of problematic personality traits (Amato, 1996; Amato and Booth, 1997).

Children of divorced parents are more likely to cohabit and to do so at a younger age; cohabitation and early partnership may be important pathways through which parental divorce affects children's partnerships (Kiernan and Cherlin, 1999). Glenn and Kramer (1987) also suggest greater willingness to divorce and lower commitment to marriage. Some people may also marry to

get away from difficult environments or economic hardship (Amato and Booth, 1997).

Parental divorce is associated with poorer communication and problematic behaviours (e.g. hostility and jealousy) (Bradbury et al, 2000) and lower socio-economic attainment and more permissive attitudes towards divorce (Amato, 1996). Stronger effects have been observed for parental divorce at a younger age and for men (Kiernan and Cherlin, 1999). Many of these factors are also strongly associated with poorer marital quality.

Amato and Booth (1997) report that when parental marital conflict is high, offspring have higher marital quality when the parents divorce than if they do not, but when conflict is low, divorce results in lower marital quality for offspring. Therefore experiencing a low stress divorce may be less damaging than growing up in an intact unhappy household. Multiple parental divorces and being less close to mother or father following divorce were associated with more marital problems (Amato and Booth, 1991).

Amato and Booth (1997) found that parents' education and income positively affect the quality and stability of children's marital relationships. They suggest that higher resource parents are able to ease their children's economic strain and facilitate their children's own socio-economic attainment (e.g. through increasing the likelihood of entering higher education).

However, Burns and Dunlop (2000) suggest that the effects of parental divorce do not have a significant effect over and above the effects of personal characteristics, which have powerful effects on personal relationships. A heritability component of psychological and personality characteristics may therefore account for parental effects.

#### **2.4.2 Significant others**

Lewis and Spanier (1976) review findings that suggest that approval or opposition to a relationship by family and friends can significantly affect marital quality. While a strong social network can increase marital quality, continued resistance can adversely affect the quality of a relationship.

#### **2.4.3 Stressful events**

Williams (1995) reports a significant correlation between stressful life events and marital quality when stressful life events were weighted by rating of coping difficulty. Other studies have found larger effects, but they generally included minor events and daily stresses or strains (which could have overlap with measures of marital quality such as relationship conflict). Stressful life events such as traumatic events and economic or work related stressors can contribute to increased family strain and relationship distress through couples' aversive and ineffectual responses to conflict (Bradbury et al, 2000). However, couples who are able to cope may strengthen their relationship.

### **2.5 Conclusions**

Marital quality has been conceptualised and measured in many ways, making it difficult to compare findings and establish general conclusions. There may be important differences in the findings and conclusions drawn depending on whether the quality of a relationship is assessed by observers or participants

and whether the focus of the measurement is on patterns of interaction, satisfaction or adjustment. This study aims to use several measures of marital quality to examine the connections between self-evaluations of the couple relationship and a range of background characteristics.

Numerous studies have found relationships between biographic factors and marital quality. These include: personal characteristics such as personality, mental and physical health, socio-economic factors, previous relationships and attitudes; relationship factors such as duration of marriage, cohabitation and presence of children; and other background factors such as parental marital quality and divorce. The present research aims to further elaborate on such influences amongst a large sample of both married and cohabiting people.

### **3.0 A model of marital quality**

The evidence surveyed in the previous section was developed into a model of the factors affecting marital/relationship quality. Crucially, in addition to relating the factors together, the proposed reasons for these links were also explicated where possible.

Research findings frequently present direct linear associations between predictors and outcomes. However, such relationships are likely to be overly simplistic. For example, factors such as education and parental divorce are unlikely to have a direct influence on perceptions of relationship satisfaction, but may affect such outcomes through their effects on other variables. These mediated effects are often difficult to disentangle and this makes it problematic to ascribe relative importance to different variables. However, by specifying predicted pathways of influence in advance, it was hoped to evaluate many of the claims apparent in the literature rather than adopting a more exploratory approach.

The model of factors influencing marital/relationship quality based on the literature appears in Appendix 2a. A brief overview of the findings on which the model is based and the mechanisms by which these factors have been proposed to influence each other are provided in Appendix 2b.

The theoretical model based on previous findings was necessarily restricted by the information available in the NCDS dataset. Thus a compromise had to be drawn and the final hypothesised model represents a pragmatic version of the full diagram. In some cases this meant that a complete section of the model could not be tested (e.g. information about interactional styles was not available). In other cases, the information available was not designed for the particular uses of this study. Further details of the model tested are given in the following section.

## **4.0 Method**

The following sections provide details of the people who were included in the NCDS, the approach to the analyses and how the large data set was prepared. The full NCDS dataset and supporting materials (e.g. the survey instruments used and details of coding) were obtained from the Centre for Longitudinal Studies.

### **4.1 Subjects**

#### **Responses**

The target number of respondents for the fifth sweep (age 33) of the NCDS was 15,666. Of this number, 13,444 were traced. Information was obtained from 85%, 83% and 81% for the cohort member interview, 'Your life' and 'What do you think?' survey instruments respectively. The partners of 9,138 subjects were traced and information from 82% of these people was obtained for the partner 'Your life' questionnaire. (Source: Ferri, 1993. See Appendix 1 for details of the survey instruments.)

#### **Representativeness**

The sample obtained at the fifth sweep was compared with previous data collection points to identify any systematic differences with regard to social and economic status, education, housing, health and demography. The only marked loss in respondents was for ethnic minority and immigrant groups. Comparisons with other nationally representative samples (e.g. the General Household Survey and the New Earnings Survey) revealed similar overall compositions. (Source: Ferri, 1993.)

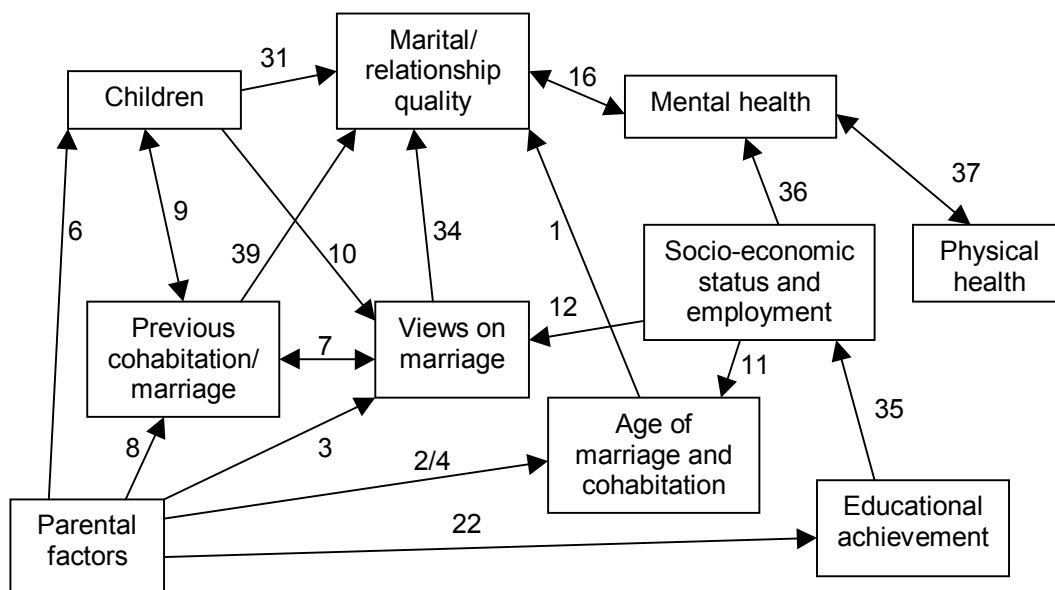
### **4.2 Analysis strategy**

Preliminary analyses were conducted on a restricted subset of the model identified from the literature. Figure 4.1 presents an overview of the model tested. Each box shows a different factor expected to be related to relationship quality, which is represented by one or more variables in the analysis. The joining arrows illustrate the anticipated direction of influence. The findings on which the model is based appear in Appendix 2b and are indexed by the numbers on the arrows.

Separate models were tested for married and cohabiting subjects and males and females, yielding four separate analyses. Data from men and women were analysed separately as evidence suggests that effects for husbands and wives are rarely identical (see e.g. Karney and Bradbury, 1995).

The final choice of variables to include in the analyses was further restricted by statistical constraints. As highly interrelated variables cannot adequately be investigated simultaneously, some prioritisation of areas to examine was necessary. Also, when variables are highly interrelated, adding multiple measures of very similar constructs leads to problems of multicollinearity. Thus, for example, only one measure of socio-economic status was used, even though more were available in the data. Some variables are also implied by others; for example, relationship length adds no information above age at current marriage (as all the respondents are the same age).

Figure 4.1: Restricted model of factors influencing marital / relationship quality (Numbered arrows indicate relevant findings and possible mechanisms of influence, detailed in Appendix 2b)



The variables used to represent each of the factors examined in the following analyses are listed in Appendix 3 and a guide to the actual questions and scoring appears in Appendix 4. The following section describes the preparatory steps in the analysis. Full details of the evaluation of the model appear in Section 5.2.

### 4.3 Data preparation

Descriptive statistics were examined for all variables to determine how the quality of the data might affect the analyses.

#### Missing data

No action was taken for variables with missing data comprising less than 10% of the overall scores. Where possible, alternative variables were used to substitute for missing values (from both interview and self-completion data). However, where considerable numbers of missing values were present and no suitable alternative information was available, variables had to be dropped from the analysis.

One of the key dependent variables representing relationship quality ('relationship happiness' - see Section 5.1.3 and Appendix 4 for more details) had an unacceptable proportion of missing values (16.5%). Given the high level of correlation between this variable and the two other measures of relationship quality, a regression equation was calculated to predict relationship happiness from these variables. This equation was then used to replace missing values and resulted in less distortion to the shape of the distribution than replacement with the mean.

### Distributions

The distributions of all variables were examined to determine how skewed shapes, highly correlated variables and extreme values might affect the analyses.

For variables with a small number of extreme values (univariate outliers), transformations were performed to reduce their influence. Given the very large sample size, significant departures from the normal distribution were expected. Therefore the shapes of the distributions of each variable and the absolute values of skew and kurtosis were used to evaluate acceptable deviancy from the normal distribution. Particularly skewed distributions were transformed.

## 5.0 Results

### 5.1 Descriptives

This section provides some overall descriptive information about the cohort members and their relationships before proceeding to test the model outlined in the previous section.

#### 5.1.1 Current relationship status

As separate analyses were planned for males and females and married and cohabiting cohort members, a breakdown of relationship status by gender appears in Table 5.1 below.

The target sample for the most recent sweep at age 33 was 15,666 of which 13,444 were traced and responses were obtained from between 10,898 and 11,407 cohort members (reported in Ferri, 1993). Information on relationship status was available for 10,960 subjects.

Table 5.1: Relationship status of subjects by gender

Relationship status	Male	Female	Unknown	Total
Currently married	3668 (33.5%)	4029 (36.8%)	1 (0.0%)	7698 (70.2%)
Currently cohabiting	585 (5.3%)	547 (5.0%)	1 (0.0%)	1133 (10.3%)
Currently not married/cohabiting	499 (4.6%)	666 (6.1%)	-	1165 (10.6%)
Never married/cohabited	594 (5.4%)	370 (3.4%)	-	964 (8.8%)
<b>Total</b>	<b>5346</b> <b>(48.8%)</b>	<b>5612</b> <b>(51.2%)</b>	<b>2</b> <b>(0.0%)</b>	<b>10960</b> <b>(100%)</b>

As can be seen from Table 5.1, the largest proportion of the sample are currently married; over two-thirds of the sample who were contacted at age 33 were currently married. Far fewer cohort members were cohabiting than married at the most recent sweep; the number of people cohabiting or currently not in a cohabiting or marital relationship were very similar. However, there may be some systematic exclusion of eligible subjects who were living together due to the definition of cohabiting used in the NCDS survey; a relationship refers to a marriage or cohabitation of three months or more.

#### 5.1.2 Relationships

The number of relationships respondents had experienced by age 33 appears in Table 5.2. The majority of the cohort who were currently married at age 33 were in their first relationship. A much higher proportion of people currently cohabiting had had more than one relationship. Women were slightly more likely than men to have had more relationships.

Table 5.2: Number of relationships<sup>1</sup> (%) by gender and relationship status

	1	2	3	4	5+	n
<b>Males</b>						
Currently married	86.2	11.6	1.8	0.4	0.01	<b>3668</b>
Currently cohabiting	44.3	41.9	10.3	2.9	0.7	<b>585</b>
Currently not married/cohabiting	71.3	21.4	5.8	1.2	0.2	<b>499</b>
<b>Females</b>						
Currently married	84.5	13.6	1.6	0.2	0.1	<b>4029</b>
Currently cohabiting	33.6	50.8	11.7	2.9	0.9	<b>547</b>
Currently not married/cohabiting	70.0	24.3	4.4	1.1	0.4	<b>666</b>

<sup>1</sup> Defined by the study as a marriage or cohabitation of three months or more.

Table 5.3 shows the mean length of respondents' current relationships by relationship status. The table illustrates that married relationships tended to be the longest. Females tended to have been in longer relationships on average than males.

Table 5.3: Mean length of current/last relationship in years (and standard deviation)

Relationship status	Male	Female
Currently married	8.9 (3.49)	10.5 (3.59)
Currently cohabiting	4.4 (3.53)	4.9 (3.94)
Currently not married/cohabiting	7.8 (3.76)	9.8 (4.20)

### 5.1.3 Marital/relationship quality

As part of the 'What do you think?' self-completion questionnaire, cohort members were asked a number of questions about their current relationship, including items concerning 'how well you get on with your husband, wife or partner'. As noted earlier (see Section 2.1) relationship quality may involve a number of different dimensions and therefore separate measures should not be combined arbitrarily if conclusions are to be meaningfully interpreted. A factor analysis of the variables relating to relationship quality revealed three main groupings. These were:

- a single general question about the happiness of the relationship;
- a series of questions about the extent to which the respondent agreed with their partner about various key issues (e.g. finances, friends and children); and
- a number of more general questions concerning more 'global' aspects of relationship quality (such as whether the respondent would marry their partner again, given the choice).

To calculate the composite measures (relationship agreement and global relationship quality), the average score from the individual responses making up that measure was calculated. Cases with more than 10% of the individual

responses missing were given a null score. Appendix 4 provides details of the actual questions used to compute the measures of relationship quality.

Generally, self-assessments of relationship quality were very high. Table 5.4 below shows the mean scores for the relationship quality measures by gender and relationship status.

Table 5.4: Means (and standard deviations) for measures of relationship quality by current relationship status and gender

Relationship quality measure	Married		Cohabiting	
	Female	Male	Female	Male
Relationship happiness <sup>1</sup>	6.10 (1.21)	6.13 (1.21)	5.79 (1.50)	5.94 (1.19)
Relationship agreement <sup>2</sup>	4.00 (0.58)	3.94 (0.56)	3.88 (0.68)	3.82 (0.61)
Global relationship quality <sup>3</sup>	2.77 (0.53)	2.75 (0.50)	2.60 (0.61)	2.58 (0.56)

<sup>1</sup> Scores range from 1 (negative) to 7 (positive)

<sup>2</sup> Scores range from 1 (negative) to 5 (positive)

<sup>3</sup> Scores range from 1 (negative) to 3.33 (positive)

The above table illustrates that the measures of relationship quality were extremely skewed, i.e. that the responses tend to cluster predominantly at the positive end of the scale. There is a close match between the distributions for both males and females suggesting that there is a similar tendency to positively evaluate current relationships. Married people tended to make much more positive evaluations of their relationship than cohabiting people.

## 5.2 Evaluation of the model

The following sections examine the relationships between variables representing biographical factors and marital/relationship quality identified by the model developed in Sections 3 and 4. Separate analyses are reported for males and females and married and cohabiting subjects.

### 5.2.1 Correlations

A correlational approach was adopted in order to assess the degree of relationship between the variables of study. A significance level of  $p=0.01$  was selected; a reasonably stringent level was required given the large data set and quantity of variables involved.

Appendices 5a-d show diagrams illustrating the relationships found between the variables entered into the analyses for married men, married women, cohabiting men and cohabiting women respectively. These diagrams provide a visual overview of the strength and direction of the correlations between the variables of study.

Appendices 6a-d contain tables showing the exact correlation values between the study variables for married men, married women, cohabiting men and cohabiting women respectively. Only significant correlations are shown; a visual indication is provided for the strength of the associations.

The starting point of the analysis was an examination of the relationship between key factors known to predict divorce and marital/relationship quality. Table 5.5 below shows a summary of the correlations between the key factors

associated with divorce and the three measures of relationship quality for married and cohabiting men and women. These results are discussed in the following sections.

Table 5.5: Significant correlations ( $p < 0.01$ ) between key predictors of divorce and marital/relationship quality<sup>1</sup>

	Married men	Married women	Cohabiting men	Cohabiting women
Age at marriage	- / .048 / .051	.071 / .086 / .080	N/A	N/A
Parental divorce	- / .048 / .051	- / - / .053	- / - / -	- / - / -
Premarital cohabitation	- / .048 / .053	- / - / -	N/A	N/A
Premarital conception	- / .066 / .075	- / - / .052	N/A	N/A
Previous relationships	- / - / -	- / - / -	- / - / -	- / - / -
Social class	- / -.060 / -.084	- / -.071 / -.087	- / - / -	- / - / -
Economic status	- / - / -	- / - / -	-.124 / - / -.135	- / - / -
Support for marriage	-.119 / -.213 / -.133	-.128 / -.203 / -.135	- / - / -	- / -.122 / -
Presence of children	- / -.049 / -.058	-.068 / -.074 / -.080	- / -.122 / -	- / -.154 / -

<sup>1</sup> Relationship happiness / global relationship quality / relationship agreement

### 5.2.2 Regression

A sequential regression analysis was conducted to examine the predictability of marital/relationship quality from the selected biographical factors. See Appendix 7 for a summary of the regression results.

Groups of variables were entered into the regression equation depending on their hypothesised links with marital/relationship quality. Factors presumed to be directly related were entered first. Factors expected to influence marital/relationship quality through their relations with other variables were entered second and the most remotely influential variables were entered in a third step.

A significant increase in the predictive power of the equation was achieved at each stage of the analysis for all measures of relationship quality for married men. For married women, the third stage did not reliably improve the equation and for cohabiting men and women both subsequent stages did not contribute significantly to the regression equation. However, the model overall was found to be statistically significant for all four groups.

The regression analysis strongly suggests that the variables chosen for the model contribute to the prediction of relationship quality. However, many of these variables were significantly inter-related. In order to more accurately assess the strength and nature of the relationships between the variables of study, a more in-depth examination of individual variables was required. The results of these analyses appear in the following section.

### 5.2.3 Hypothesis testing

The following sections examine the predictions of the model of marital/relationship quality in relation to the results obtained from the correlation and

regression analyses. Each hypothesis examined is derived from the model of marital/ relationship quality; the label numbers in parentheses relate the results to the findings and possible mechanisms identified in Appendix 2b.

*Hypothesis 1:* Earlier age of marriage predicts poorer marital quality (Appendix 2b, label 1)

Increasing age at marriage was significantly associated with higher levels of marital quality for the relationship agreement and global marital quality measures for married men and with all of the measures of marital quality for women. These correlations remain strong when the duration of the relationship is taken into account.

*Hypothesis 2:* Parental separation is associated with an earlier age of marriage (Appendix 2b, label 2)

Whether or not respondents' parents ever permanently separated or divorced was not significantly associated with age at marriage. The number of people who had experienced parental separation was small (12.9% of married men and 14.2% of married women) and therefore this effect may be more pronounced in more recent cohorts.

However, respondents' father's social class was related to age at marriage, such that increasing social class was associated with higher ages of marriage for both married men and women and mother's social class was also associated with age at marriage for married women. This concurs with findings that people from poorer backgrounds tend to marry at an earlier age (Appendix 2b, label 4).

*Hypothesis 3:* Parental divorce leads to more negative views of marriage (Appendix 2b, label 3)

Four attitude measures were included in the analysis, derived from the study variables according to Ferri (1991). These were: support for marriage; permissiveness on work and family; opposition to family life; and support for sex equality (see Appendix 4 for more details).

Whether or not respondents' parents ever permanently separated or divorced was not significantly associated with any of the attitudinal measures for married men, cohabiting men or cohabiting women. However, parental separation or divorce was associated with a lower score on the support for marriage attitude scale for married women.

However, parents' social class was related to three of the attitudinal measures for married men, such that lower social class was somewhat associated with greater support for marriage, less permissiveness and less support for sex equality.

Parental separation/divorce was associated with lower global marital quality for married men and relationship agreement for married men and women but not with any of the relationship quality measures for cohabiting respondents.

*Hypothesis 4:* Parental divorce leads to greater likelihood of premarital conception (Appendix 2b, label 6)

Married respondents whose parents had permanently separated or divorced were more likely to have had children before they were married. Although only a small proportion of respondents had had children before marriage (5.9% of married men and 9.3% of married women), 9.5% of married men whose parents had separated had children before marriage compared to 5.4% of married men whose parents had not separated and 16.3% of married women whose parents had separated had children before marriage compared to 8.1% of those whose parents had not separated.

For cohabiters, the only significant relationship between parental separation or divorce and children was that the cohabiting women whose parental relationship was intact were more likely to have had more children.

*Hypothesis 5:* There is a negative association between premarital cohabitation and marital quality (Appendix 2b, label 39)

There was a significant association between cohabitation before marriage and ratings on the relationship agreement and global marital quality measures for married men. Those respondents who had cohabited with their partner before marriage had on average lower ratings of relationship quality. Married men who had cohabited had mean scores of 2.72 and 3.90 respectively compared to 2.77 and 3.96 for married men who had not cohabited. Men who had cohabited before marrying had lived with their partner for an average of 1.9 years, compared to 2.1 years for women.

When controlling for the length of the relationship using a partial correlation, premarital cohabitation was significantly associated with marital quality for both women and men. Although people who had cohabited before marriage had been in their current relationship for a shorter average length of time than those who had not cohabited, they were more likely to have a lower rating of marital quality. Men and women who had cohabited before marriage had on average spent a year less in their current relationship than those who had married without previously living together. This suggests that people who had married at a later age were more likely to have cohabited before marriage.

As illustrated previously in Table 5.4, cohabiting people overall had lower average scores on all of the relationship quality measures than married people. Previous cohabitations with partners other than eventual spouses are considered under Hypothesis 6.

*Hypothesis 6:* Premarital romantic and sexual involvements are negative predictors of marital satisfaction (Appendix 2b, label 39)

The number of previous relationships of the respondent and their partner was not associated with any of the measures of marital quality for any of the groups studied. However, these measures only include

relationships of three months or more where the partners resided together and therefore do not give a complete indication of the full romantic history of the respondents.

*Hypothesis 7: Premarital cohabitators are more likely to have less traditional views on marriage* (Appendix 2b, label 7)

Cohabitation before marriage was significantly associated with all of the attitudinal measures for married men. Respondents who had cohabited with their partner prior to getting married were less likely to agree with statements showing support for marriage and family life and more likely to agree with statements showing greater permissiveness on work and family life and support for sex equality.

For married women, cohabitation before marriage was only associated with lower support for marriage and greater support for sexual equality.

Table 5.6 Mean (and standard deviation) scores on attitude scales<sup>1</sup>

	<b>Married men</b>	<b>Married women</b>	<b>Cohabiting men</b>	<b>Cohabiting women</b>
Support for marriage	3.13 (0.58)	3.26 (0.56)	3.61 (0.52)	3.77 (0.53)
Permissiveness on work & family	2.45 (0.53)	2.27 (0.52)	2.39 (0.52)	2.27 (0.54)
Opposition to family life	2.69 (0.75)	2.95 (0.77)	2.71 (0.76)	3.00 (0.80)
Support for sex equality	2.30 (0.55)	2.07 (0.49)	2.19 (0.54)	1.91 (0.50)

<sup>1</sup> Scored 1-5: 1 Strongly agree, 2 agree, 3 uncertain, 4 disagree, 5 Strongly disagree (see Appendix 4 for more details)

Table 5.6 compares the average attitude scores for married and cohabiting men and women. Generally, cohabitators indicated less support for marriage, greater permissiveness towards work and the family, greater opposition to family life and greater support for sex equality than married people.

The differences between gender were often greater, however, with men generally showing a greater support for marriage, less permissiveness, less opposition to family life and less support for sex equality than women.

Some significant associations were also found between the attitudinal measures and the number of previous relationships. A greater number of previous relationships was associated with less support for marriage and more support for sex equality for married men and women.

*Hypothesis 8:* Premarital cohabitators are more likely to have experienced parental separation (Appendix 2b, label 8)

Married respondents whose parents had separated or divorced were significantly more likely to have cohabited with their partner before becoming married. 17.5% of married men who had cohabited prior to marriage had experienced parental separation compared to 10.4% who had not cohabited. 19.6 % of married women who had cohabited prior to marriage had experienced parental separation compared to 11.3 % who had not cohabited.

People who were in a cohabiting relationship were also much more likely to have experienced parental separation or divorce than those who were married. Of those people who were currently cohabiting, 20.9% of men and 19.7% of women had experienced parental separation, compared to 12.9% of men and 14.2% of women who were currently married.

*Hypothesis 9:* Premarital conception is associated with premarital cohabitation (Appendix 2b, label 9)

There was a strong association between premarital conception and premarital cohabitation. 15.6% of men and 25% of women who cohabited before marrying their partner had children before they married compared to 0.2% of men and 0.3% of women who did not cohabit before marriage.

Respondents who had children before they were married had lower ratings of marital quality, on average, than those who had children after they were married. For example, married men had mean scores of 2.62 on the global relationship quality measure if they had children before marriage compared to 2.76 if they had children after they were married. Married women had mean scores of 2.70 and 2.77 respectively.

*Hypothesis 10:* Premarital conception is associated with less traditional views on marriage (Appendix 2b, label 10)

There was a strong inverse relationship between premarital conception and support for marriage for married people, but none of the other attitudinal measures; people who had had children before marriage tended to express less traditional views towards marriage.

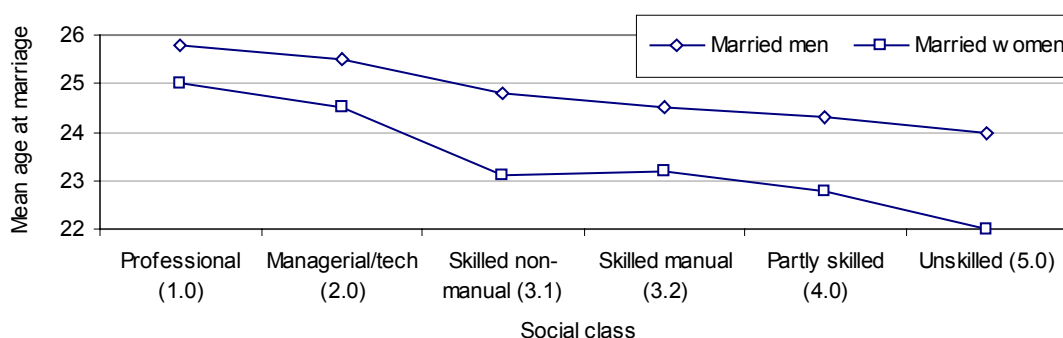
Number of children was associated with all of the attitudinal scales for married people (more children were related to greater support for marriage, less permissiveness about work and family, greater support for the idea that people without children have more freedom and less support for sex equality).

For cohabiting people, having no children was associated with greater support for sex equality. For cohabiting men, having more children was also associated with less permissiveness towards work and the family.

**Hypothesis 11: Lower socio-economic status is associated with earlier age of marriage** (Appendix 2b, label 11)

There was a significant correlation between social class and age at marriage, with people from lower socio-economic groups tending to marry at an earlier age. The graph below shows the mean age at marriage by the social class of the respondent.

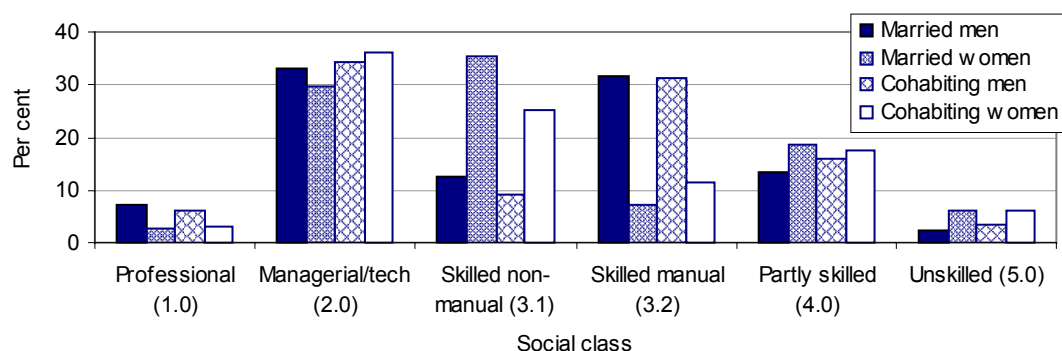
Figure 5.1: Mean age at marriage by social class



An earlier age at marriage was also strongly related to receiving state benefits, but not with any of the other measures relating to socio-economic status and employment.

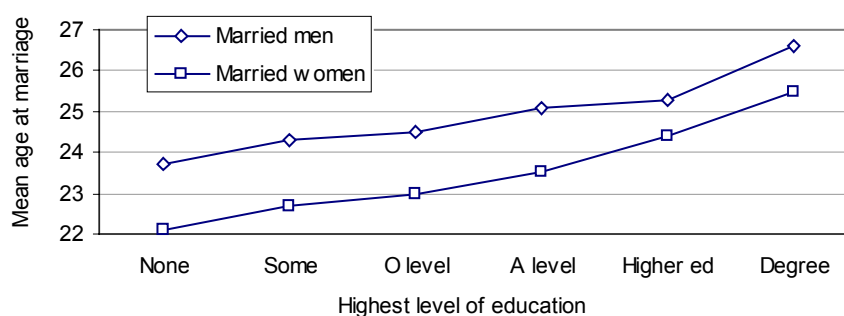
There was no clear relationship between current marital status and social class (see Figure 5.2); the proportions of cohabiting and married people in each social class were very similar. The differences in gender were far more pronounced, with greater proportions of men in professional and skilled manual jobs and larger proportions of women in skilled non-manual work.

Figure 5.2 Percentage of people in each social class by marital status and gender



**Hypothesis 12: Lower education level is associated with earlier age at marriage** (Appendix 2b, label 11)

The highest qualification level obtained was significantly related to age at marriage such that lower educational achievement was associated with marriage at a younger age. The graph below shows the mean age at marriage by the education level of the respondent.

Figure 5.3 Mean age at marriage by highest level of education

The relationship between marital status and education level was not clear. A greater proportion of cohabiters were educated to degree level than married people, but the average education level was higher for married people. For both married and cohabiting people, a greater proportion of men reached the higher education levels than women.

*Hypothesis 13: Education affects views on marriage* (Appendix 2b, label 12)

Highest achieved qualification level was significantly associated with all of the attitude scales except for opposition to family life. A greater level of education was associated with greater permissiveness on work and the family and greater support for sex equality for married and cohabiting men and women. Higher qualification level was also associated with less support for marriage for all groups of respondents except married women.

*Hypothesis 14: Higher levels of depression and anxiety are associated with lower marital quality* (Appendix 2b, label 16)

The malaise inventory was administered at age 23 and age 33 and is a measure of the common symptoms of anxiety, depression and psychological distress (see Appendix 4 for more details).

A higher total malaise inventory score at age 33 (indicating higher levels of depression and anxiety) was associated with lower scores on all three measures of relationship quality for all groups of respondents. A higher total malaise score at age 23 was associated with lower relationship quality scores for all measures for married men and women and cohabiting women at age 33, but only with lower relationship agreement for cohabiting men.

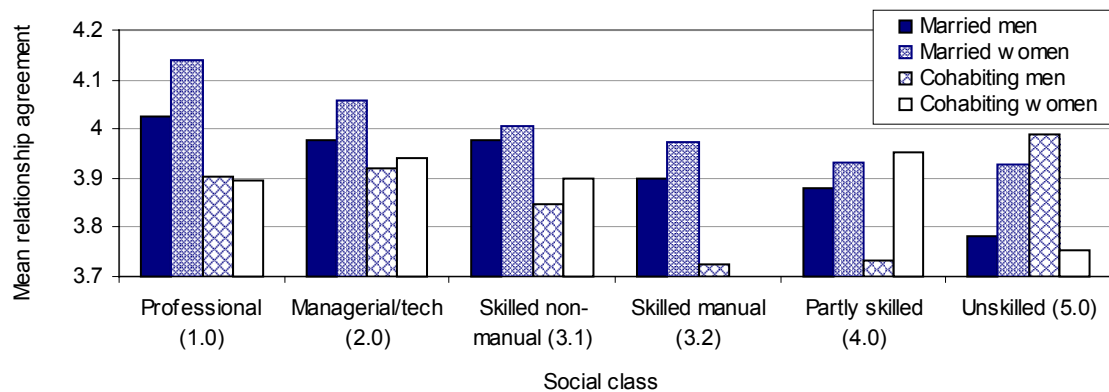
The measures of mental health were more highly associated with marital quality for women than men, who also had higher average scores on these scales. Cohabiting men and women had higher malaise scores at both ages 23 and 33 than their married counterparts.

The presence of children was also significantly associated with poorer mental health, particularly for women. Female respondents with more children had on average higher scores on the malaise inventory at both ages 23 and 33. For cohabiting but not married men, the number of children was associated with mental health at age 33.

**Hypothesis 15: The greater the socio-economic adequacy of the family the greater the marital quality** (Appendix 2b, label 21)

Higher social class (based on the respondent's current or last job) was associated with greater scores on the relationship agreement and global marital quality measures for married respondents. The average marital quality score decreases steadily across the social class groupings for married men and women as shown in Figure 5.4. However, the pattern is not clear for cohabiters, who demonstrate an increase in relationship quality towards the unskilled end of the scale.

Figure 5.4 Mean relationship agreement by social class



The receipt of state benefits and presence of any debts were also associated with lower levels of marital quality for married respondents, although again the pattern was not clear for cohabiting respondents.

Mother's and father's social class (at age 16) was associated with current social class for married men and father's social class was associated with current social class for married women. This supports the finding that parents' education and income facilitates children's socio-economic attainment (see Appendix 2b, label 22). However, parental social class was not significantly associated with any of the socio-economic status and employment measures for cohabiting respondents.

**Hypothesis 16: Childless individuals report a higher level of marital satisfaction than people with children** (Appendix 2b, label 31)

Eighty-two per cent of married men, 86% of married women, 52% of cohabiting men and 60% of cohabiting women had children at age 33.

A greater number of children was associated with lower levels of relationship quality for all measures for married women, two of the measures for married men and the relationship agreement measure for cohabiting men and women.

Figure 5.5 Percentage mean difference in marital quality measures between respondents with and without children

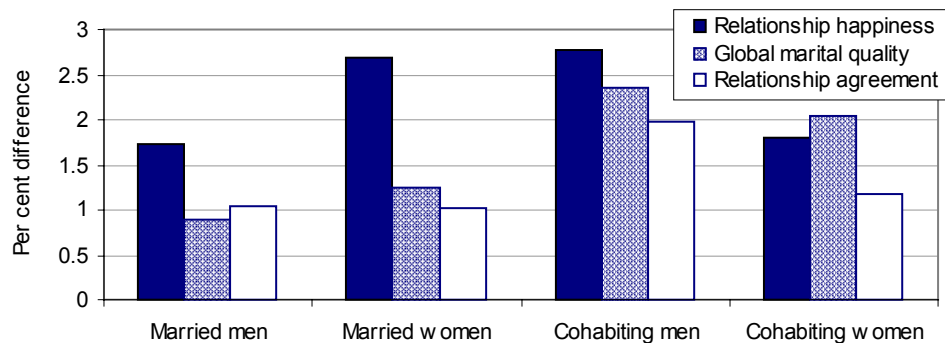


Figure 5.5 shows the average differences in relationship quality scores for married and cohabiting men and women with and without children. For all measures and groups tested, there was a significant difference in relationship quality between respondents with children and those without. The differences vary with each measure but are in general more pronounced for cohabiting respondents. Premarital conception was associated with lower levels of marital quality for men and women (see Hypothesis 9).

*Hypothesis 17: Greater acceptance of divorce is related to lower marital quality*  
(Appendix 2b, label 34)

All of the attitude scale scores were correlated with all of the measures of marital quality for married men such that more traditional attitudes (e.g. support for marriage) were associated with greater marital quality. The pattern for married women was the same, except that no correlation was found between marital quality and support for sex equality.

The pattern of associations for cohabiting respondents was less complete; only some of the relationship quality measures were significantly associated with some of the attitude scales. However, the trend was the same, with less traditional attitudes related to lower levels of relationship quality.

Few of the factors studied were strongly linked directly to the measures of marital quality. The attitudinal scales offered the strongest correlations and these effects remained when the influence of other variables had been taken into account.

*Hypothesis 18: Higher education leads to greater socio-economic attainment*  
(Appendix 2b, label 35)

The highest qualification level achieved was very highly correlated with social class for all groups of respondents; people who achieved higher levels of education were more likely to be in the higher social class groups. Greater educational achievement was also associated with a higher likelihood of being in full-time employment and a lower likelihood of receiving state benefits.

*Hypothesis 19: Socio-economic status is related to health outcomes* (Appendix 2b, label 36)

Physical health was found to be significantly associated with social class. Poorer health ratings on all of the measures were related to lower current social class for married men and women. Poorer physical health at age 33 but not at age 23 was associated with lower social class for cohabiting respondents.

Higher ratings of physical health were also associated with a greater likelihood of being in full-time employment and less likelihood of receiving state benefits or being in debt.

Scores on the measures of mental health were associated with many of the socio-economic factors. These results indicated a relationship between higher levels of depression and anxiety and lower social class, less likelihood of being in full-time employment and a higher likelihood of receiving benefits and being in debt.

*Hypothesis 20: There is a reciprocal relationship between mental and physical health* (Appendix 2b, label 37)

There were strong associations between all of the measures of mental health and physical health for both married and cohabiting men and women. Lower ratings of physical health at age 23 and age 33 were associated with higher levels of depression and anxiety at both time points. The strongest correlations were between the malaise inventory score at age 33 and both measures of physical health at age 33.

The associations were generally stronger for women than men. The direction of influence also appeared to be stronger from past mental health to present physical health than from past physical health to present mental health.

As with mental health, the measures of physical health were highly correlated with relationship quality. Lower ratings on all of the physical health measures were associated with poorer current relationship quality for married men and women. For cohabiting respondents, lower ratings of general health at age 33 were associated with poorer relationship quality.

#### 5.2.4 Additional findings

The following sections provide details of further findings arising from the present study which were not the subject of any prior explicit predictions.

1. Measures of relationship quality

The composite scores of relationship quality ('relationship agreement' and 'global marital quality') were more likely to be associated with the key factors of the study than the one item relationship happiness score. For the single item measure of relationship happiness a large proportion of people selected 'Very happy', leaving a very skewed distribution with little opportunity to detect any variation in its associations with other factors. The multi-factor approach provided more variation in scores and therefore a potentially more sensitive

measure of relationship quality. Responses to single-item relationship satisfaction questions are also more likely to be unstable over long periods. Multi-factor variables may therefore be more useful in understanding relationships with other factors.

## 2. Length of relationship

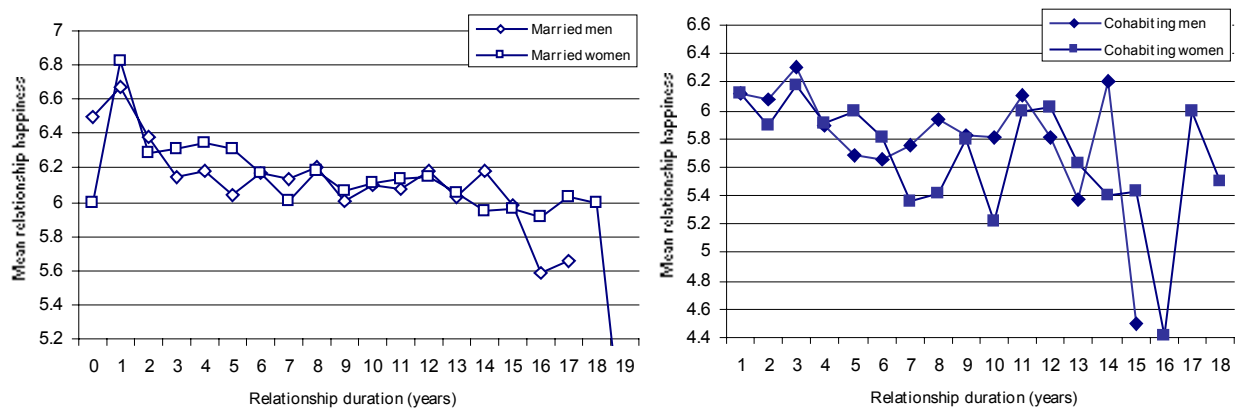
Table 5.7 below shows the strength of the associations between the length of the current relationship and the different relationship quality measures for married and cohabiting men and women. Almost all of these correlations were significant suggesting that, in general, longer relationships were associated with poorer current relationship quality.

Table 5.7 Correlations between relationship duration and relationship quality (all significant at the  $p < 0.01$  level)

	Correlation		
	Relationship happiness	Relationship agreement	Global relationship quality
Married men	-.055	-.069	-.075
Married women	-.085	-.107	-.113
Cohabiting men	-.125	-.152	
Cohabiting women	-.149	-.160	-.133

Figures 5.6A and 5.6B below show the average relationship happiness scores by length of the current relationship for married and cohabiting respondents respectively. Mean relationship satisfaction decreases gradually with longer relationships for married people. However, the association between relationship satisfaction and relationship duration is less consistent for cohabiting respondents.

Figures 5.6 A & B: Mean relationship happiness by length of relationship



## 3. Children

Whether respondents had children or not was associated with many of the variables examined in relation to relationship quality. For example, a greater number of children was associated with more traditional attitudes, lower socio-economic status, lower educational achievement

and poorer mental and physical health. These factors were also strongly related to relationship quality.

A younger age at the birth of respondent's first child was also consistently associated with lower social class, lower educational achievement, receipt of state benefits, a younger age at marriage and poorer physical health.

4. Parental separation or divorce

The experience of parental separation or divorce was only weakly related to many of the key factors of the study that it was postulated to be associated with (see Appendix 2b), particularly the attitudinal measures and relationship quality itself. Parental separation was more closely related to premarital cohabitation and conception, lower education, poorer mental health and the experience of debt. The influence of parental separation is not clear from the present study but may contribute subtly through increasing the likelihood of actions associated more directly with relationship quality.

5. Socio-economic status and family background

The financial experience of respondents directly affected their ratings of relationship quality. For example, indicators of financial hardship (such as the receipt of state benefits and experience of debt) were reflected in lower ratings of relationship quality.

The socio-economic factors included in the study were also strongly associated with other key variables such as age at marriage, number of previous relationships and cohabitation before marriage. The social class of respondents' parents was also related to their views on the attitude scales and their likelihood of cohabiting before marriage.

Thus, family background and extra-relationship stresses appear to interact with many of the factors associated with relationship quality and to play an important role in influencing peoples' appraisals of their relationships.

6. Views on marriage and the family

Respondents' ratings on the four attitudinal measures (see Appendix 4) were strongly associated with relationship quality and a number of the key factors of interest in the study (such as age at marriage, cohabitation before marriage, presence of children, socio-economic status and education level).

Previous research has often focused on the connection between marital quality and views on divorce (for example that greater acceptance of divorce is associated with poorer marital quality). This study suggests that people with more traditional opinions towards marriage and the family tend to evaluate their relationship more favourably.

However, it is not clear from the present study the degree to which previously held attitudes influence relationship appraisal and key

decisions (such as partner selection, choosing to live together, get married or have children) or how particular attitudes are shaped by the decisions made in the peoples' lives.

### **5.3 Discussion**

Many of the predictions derived from the model of relationship quality (see Figure 4.1) were borne out by the present study. However, there are competing explanations for the associations found between the factors investigated. The following section discusses some of the possible implications of these findings for understanding how people view their relationships and assess their meaning and quality. The key limitations of the present study and the implications for interpreting the results are also considered.

#### **5.3.1 Effects on relationship quality**

How biographical factors affect peoples' relationship quality will operate in complex ways, vastly oversimplified by the representations in this study. Peoples' backgrounds and experiences will affect their expectations and appraisals of relationships and this will often act subtly and unconsciously and be revised throughout their lives.

Background influences will frequently operate through affecting marital interactions by influencing styles and patterns of interaction which are the more direct determinants of marital quality. Factors relating directly to how couples interact will have more influence over their perceptions of their relationships. Although these variables are difficult to measure, understanding these influences is an important step.

In the present study, a greater number of significant findings were identified for the relationship agreement and global relationship quality measures rather than the relationship happiness measure (see Appendix 4 for the questions involved in these measures). This suggests that the influence of certain key factors may operate more consistently on relationship quality by encouraging more disagreements or doubts about the relationship rather than affecting happiness per se.

Background material circumstances, particularly economic ones would be expected to influence general life satisfaction and would therefore impact on appraisals of relationships. A poor economic situation also creates additional pressures on relationships. Personal circumstances might be expected to affect all facets of satisfaction, not just those relating to relationships. The difficulties of poor physical and mental health would be expected to negatively influence relationship quality as they create more pressure on personal relationships and are strong determinants of satisfaction with all aspects of life.

A relationship can be a source of stress or support, depending on various key elements of its quality. For example, respondents with children on average rated their relationship quality as slightly lower than respondents without children. This, and other related findings, implies that the presence of difficult or stressful factors may influence people's appraisals of their relationships by

gradually eroding positive evaluations rather than causing them to view their relationship in an overtly negative way.

The appraisal of a relationship is a cognitive and emotional activity and is strongly related to thoughts and opinions on other relevant issues. This influence may work in both directions such that a stronger, more rewarding relationship may give rise to more positive evaluations of marriage and relationships in general. Equally, prior convictions on how relationships and marriage should be may alter perceptions of actual relationships. Also these views and expectations will be shaped and revised by experience and exchanges with other people.

### 5.3.2 Study limitations

Many of the associations detailed in the evaluation of the model of relationship quality consisted of relatively small statistical effect sizes. This may be partly accounted for by the lack of variation in the measures of relationship quality (see Section 5.1.3), making it difficult to reliably identify associations with other variables.

The small differences between the groups studied have important implications for interpreting the results. For example, although the average marital quality for those respondents who cohabited before marriage is lower than for those who did not, there is a large overlap between the distributions of marital quality for the two groups. Thus, there will be many people in the premarital cohabitation group who have a higher rating of marital quality than the average rating for the group who did not cohabit before marriage. Overall, there may be a difference, but as it is a slight one, the division between the two groups (those that did and did not cohabit) is marginal and further investigation would be required to identify and expand on what factors may be at work to promote this difference.

Small effect sizes also mean that it is very difficult to predict the relationship quality of an individual from a factor such as whether they cohabited before marriage or not. However, a combination of such factors would increase confidence in being able to predict broadly what sort of groups people are likely to fall into with regards to their relationship quality.

There are many potential confounding variables operating in a study of this kind as there is little opportunity for control. The large representative sample works to offset these difficulties. However, the possibility still remains that a number of findings are spurious or due to inter-relationships with other variables. Other unmeasured factors could account for the findings, for instance, or some effects could be too subtle to be captured by the necessarily simplified measures.

More factors were found to be significantly related to each other for married than cohabiting respondents. However, as the group sizes for married people were much larger, more and smaller effects would be expected to be found. The background influences are also highly inter-related making it very difficult to pin down the particular influence of single variables or groups of variables.

There are many approaches to assessing the quality of a relationship and this may have implications for the results obtained. Different aspects of relationship quality may be related to biographical factors in distinct ways but

this could not be adequately explored. Information concerning relationships were also only obtained from one partner in the couple relationship. Thus, only one person's perspective on the relationship was available, which may or may not have concurred with the partner's views. The study also found that many of the partner factors that were available (e.g. number of previous relationships or economic factors) were not always related to other factors in the same way as the equivalent variables for the respondent, suggesting that these differences may be important. Also, as many of the measures (including relationship quality) were only collected on one occasion, there was no means to ascertain whether this was indicative of longer-term appraisals or to examine changes over time.

Given the restrictions on the variables included in the analyses and the nature of the study design it becomes very difficult to attribute causality to any of the relationships uncovered. However, where there is increasing evidence for a relationship, including possible explanations, more weight is lent to the possibility of causation. Also, because of the longitudinal design, some causation can be attributed to factors that were measured earlier in time. However, due to the particular interests of the study and more complete data at later sweeps, most information was taken from the most recent data collection point at age 33.

Large-scale studies often have to cope with large quantities of missing, inconsistent and inaccurate information. Although the quality of the data increased substantially across different sweeps, large proportions of missing data from early sweeps and non-correspondence between measures used in different sweeps meant that many longitudinal influences could not be investigated.

The results may not be generalisable to younger people as, although representative, only one cohort from a particular generation has been analysed. Further cohorts would have to be studied in combination with cross-sectional studies to examine the generalisability of the findings. Most of the factors studied was also largely obtained from information at one data collection point as this included most of the pertinent factors to the study.

## **6.0 Conclusions**

This study aimed to build on previous work identifying biographical factors associated with relationship stability by exploring their influence on relationship quality. A model based on the literature was evaluated using information from a large scale longitudinal data set. The results concerned a sample of 3668 male and 4029 female married people and 585 male and 547 cohabiting people interviewed at age 33 in 1991.

### **6.1 Key predictors of divorce**

A number of biographical factors have consistently been identified as predictors of divorce. By examining their associations with relationship quality, the mechanisms by which these factors have their effects may be further understood.

#### **Early age at marriage**

A later age at marriage was associated with higher marital quality, even after relationship duration was taken into account. The effect was most prominent for people marrying in their teens, who show a marked lower level, and recently married people who show a higher level. There appears to be a web of influences working such that, for example, parents' social class, lower socio-economic status and poorer education were associated with an earlier age at marriage.

#### **Premarital cohabitation**

Premarital cohabitation was associated with a lower average marital quality for married men but not for married women. However, premarital cohabitation was associated with many of the other factors related to marital quality such as a greater number of children, less traditional attitudes, lower socio-economic status and poorer health. Currently cohabiting respondents had lower average relationship quality than married respondents for all measures.

#### **Premarital conception**

Respondents who had children before they were married had lower average ratings of marital quality than those who had children after they were married. Relationship quality was generally lower for people with children and was also associated with the number of children.

#### **Previous relationships**

The number of previous relationships of the respondent or their partner was not associated with current relationship quality. Respondents with more prior relationships were more likely to be currently cohabiting and to have less traditional attitudes.

#### **Parental divorce**

Parental separation or divorce was associated with lower relationship quality on some measures for married respondents but not for cohabiting respondents. Parental separation was not significantly associated with many factors in the study, including age at marriage.

### Poor economic circumstances

Lower social class, the receipt of welfare benefits and presence of debts were associated with lower relationship quality for married respondents. Poorer economic circumstances were also related to other factors directly associated with relationship quality such as an earlier age at marriage, premarital cohabitation and poorer physical and mental health.

### Attitudes towards marriage and the family

The attitudinal measures yielded some of the highest correlations with relationship quality; less traditional attitudes towards marriage and the family were associated with lower relationship quality. Men were more likely to hold traditional attitudes while premarital cohabitation and conception were associated with less support for marriage and the family.

## **6.2 A network of influences**

In addition to the key predictors of divorce a number of other factors were found to present important influences on relationship quality. Poorer physical and mental health were strongly associated with lower levels of relationship quality and were closely related to each other as well as with poorer economic circumstances and a greater number of children. Education level was related to key background factors such as socio-economic status and attitudes towards marriage. The presence of children was related to lower relationship satisfaction as well as being associated with many other factors directly linked to relationship quality.

There was a high level of inter-relatedness between the factors included in the present study, producing a complex network of influences between biographical factors and relationship quality. This high level of interaction makes it difficult to confidently apportion the direction and magnitude of influence of individual variables. However, few factors were likely to impact directly on relationship quality, instead operating on background circumstances and quality of life to more indirectly influence the interactions and appraisals that would be reflected in measures of relationship quality.

## **6.3 Caveats and further work**

The findings of the present study should be considered in the context of the limitations of the approach. The study measures were necessarily simplifications of respondents' background circumstances and the limited opportunities for control, missing data and cohort and subject factors should also be noted. The sizes of the statistical associations were often small and given the scale of the study, some results may be expected to be spurious. Direct mechanisms of influence may also be difficult to establish as even reliable correlations do not imply any clear form of causation.

However, this study has provided a wide-ranging review of previous work concerning relationship quality and used a large-scale quantitative approach to investigate the links between key biographical factors and relationship quality. The findings provide an indication of the most potentially productive areas to pursue in future research in this area.

Further in-depth exploratory work would be required to determine just how the pathways of influence might occur and to answer key questions about interactions between processes. The present findings would be usefully elaborated with further analyses of subsequent sweeps of the NCDS and comparisons with other longitudinal studies, such as the BCS-70.

## 7.0 References

- Amato, P. R. (1996) Explaining the intergenerational transmission of divorce. *Journal of Marriage and the Family*, 58, 628-640
- Amato, P. R. & Booth, A. (1991) Consequences of parental divorce and marital unhappiness for adult well-being. *Social Forces*, 69 (3), 895-914
- Amato, P. R. & Booth, A. (1997) *A generation at risk: Growing up in an era of family upheaval*. Harvard University Press
- Amato, P. R. & Rogers, S. J. (1999) Do attitudes toward divorce affect marital quality? *Journal of Family Issues*, 20 (1), 69-86
- Belt, W. & Abidin, R. R. (1996) The relation of childhood abuse and early parenting experiences to current marital quality in a nonclinical sample. *Child Abuse and Neglect*, 20 (11), 1019-1030
- Belsky, J., Lang, M. E. & Rovine, M. (1985) Stability and change in marriage across the transition to parenthood: A second study. *Journal of Marriage and the Family*, 47, 855-865
- Belsky, J., Spanier, G. B. & Rovine, M. (1983) Stability and change in marriage across the transition to parenthood. *Journal of Marriage and the Family*, 45 (3), 567-577
- Berrington, A. & Diamond, I. (1999) Marital dissolution among the 1958 British birth cohort: The role of cohabitation. *Population Studies*, 53, 19-38
- Bolger, N., DeLongis, A., Kessler, R. C. & Wethington, E. (1989) The contagion of stress across multiple roles. *Journal of Marriage and the Family*, 51, 175-183
- Booth, A. & Edwards, J. N. (1989) Transmission of marital and family quality over the generations: The effect of parental divorce and unhappiness. *Journal of Divorce*, 13 (2), 41-58
- Booth, A. & Johnson, D. R. (1994) Declining health and marital quality. *Journal of Marriage and the Family*, 56, 218-223
- Bouchard, G., Lussier, Y. & Sabourin, S. (1999) Personality and marital adjustment: Utility of the five-factor model of personality. *Journal of Marriage and the Family*, 61, 651-660
- Bradbury, T.N., Fincham, F. D. & Beach, S. R. H. (2000) Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and the Family*, 62, 964-980
- Brynnner, J., Ferri, E. & Shepherd, P. (1997) *Twenty-something in the 1990s: Getting on, getting by, getting nowhere* Ashgate Publishing Ltd
- Burman, B. & Margolin, G. (1992) Analysis of the association between marital relationships and health problems: An interactional perspective. *Psychological Bulletin*, 112 (1), 39-63

- Burns, A. & Dunlop, R. (2000) Parental divorce, personal characteristics and early adult intimate relationships: A longitudinal Australian study. *Journal of Divorce and Remarriage*, 33, 91-109
- Caughlin, J. P., Huston, T. L. & Houts, R. M. (2000) How does personality matter in marriage? An examination of trait anxiety, interpersonal negativity and marital satisfaction. *Journal of Personality and Social Psychology*, 78 (2), 326-336
- Clarke, L. & Berrington, A. (1999) Socio-demographic predictors of divorce. In J. Simons (Ed.) *High divorce rates: The state of the evidence on reasons and remedies (Vol 1)*. One Plus One Marriage and Partnership Research
- Conger, R. D., Elder, G. H. Jr, Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., Huck, S. & Melby, K. J. (1990) Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family*, 52, 643-656
- Craddock, A. E. (1991) Relationships between attitudinal similarity, couple structure and couple satisfaction within married and de facto couples. *Australian Journal of Psychology*, 43 (1), 11-16
- Davila, J., Bradbury, T. N. & Fincham, F. (1998) Negative affectivity as a mediator of the association between adult attachment and marital satisfaction. *Personal Relationships*, 5, 467-484
- Dehle, C. & Weiss, R. L. (1998) Sex differences in prospective associations between marital quality and depressed mood. *Journal of Marriage and the Family*, 60, 1002-1011
- DeMaris, A. & Leslie, G. R. (1984) Cohabitation with the future spouse: Its influence upon marital satisfaction and communication. *Journal of Marriage and the Family*, 46 (1), 77-84
- Feeney, J. (1999a) Romantic bonds in young adulthood: Links with family experiences. *Journal of Family Studies*, 5 (1), 25-46
- Ferri, E. (Ed) (1993) *Life at 33: The fifth follow-up of the National Child Development Study*. National Children's Bureau & City University
- Fincham, F. D. (1997) Understanding marriage: From fish scales to milliseconds. *The Psychologist*, December 1997
- Fincham, F. D. & Bradbury, T. N. (1987) The assessment of marital quality: A reevaluation. *Journal of Marriage and the Family*, 49, 797-809
- Frommer, E. A. & O'Shea, G. (1973) The importance of childhood experience in relation to problems of marriage and family building. *British Journal of Psychiatry*, 123, 157-160
- Glenn, N. D. (1990) Quantitative research on marital quality in the 1980s: A critical review. *Journal of Marriage and the Family*, 52, 818-831
- Glenn, N. D. (1998) The course of marital success and failure in five American 10-year marriage cohorts. *Journal of Marriage and the Family*, 60, 569-576

- Glenn, N. D. & Kramer, K. B. (1987) The marriages and divorces of the children who divorce. *Journal of Marriage and the Family*, 49, 811-825
- Glenn, N. D. & McLanahan, S. (1982) Children and marital happiness: A further specification of the relationship. *Journal of Marriage and the Family*, 44, 63-72
- Gottman, J. M. (1994) *What predicts divorce? The relationship between marital processes and marital outcomes*. Lawrence Erlbaum Associates, Inc.
- Gottman, J. M. & Krokoff, L. J. (1989) Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology*, 57 (1), 47-52
- Gottman, J. M., Coan, J., Carrere, S. & Swanson, C. (1998) Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and the Family*, 60, 5-22
- Gove, W. R., Hughes, M. & Style, C. B. (1983) Does marriage have positive effects on the psychological well-being of the individual? *Journal of Health and Social Behaviour*, 24, 122-131
- Grote, N. K., Frieze, I. H. & Stone, C. A. (1996) Children, traditionalism in the division of family work and marital satisfaction: "What's love got to do with it?" *Personal Relationships*, 3, 211-228
- Heaton, T. B. & Blake, A. M. (1999) Gender differences in determinants of marital disruption. *Journal of Family Issues*, 20 (1), 25-45
- Horwitz, A. V., McLaughlin, J. & White, H. R. (1997) How the negative and positive aspects of partner relationships affect the mental health of young married people. *Journal of Health and Social Behaviour*, 39, 124-136
- Houseknecht, S. K. & Macke, A. S. (1981) Combining marriage and career: The marital adjustment of professional women. *Journal of Marriage and the Family*, 43, 651-661
- Johnson, D. R., Amoloza, T. O. & Booth, A. (1992) Stability and developmental change in marital quality: A three-wave panel analysis. *Journal of Marriage and the Family*, 54, 582-594
- Johnson, D. R. & Booth, A. (1998) Marital quality: A product of the dyadic environment or individual factors? *Social Forces*, 76 (3), 883-904
- Johnson, D. R., White, L. K., Edwards, J. N. & Booth, A. (1986) Dimensions of marital quality: Toward methodological and conceptual refinement. *Journal of Family Issues*, 7 (1), 31-49
- Karney, B. R. & Bradbury, T. N. (1995) The longitudinal course of marital quality and stability: A review of theory, method and research. *Psychological Bulletin*, 118 (1), 3-34
- Karney, B. R. & Bradbury, T. N. (1997) Neuroticism, marital interaction and the trajectory of marital satisfaction. *Journal of Personality and Social Psychology*, 72 (5), 1075-1092

- Kelly, E. L. & Conley, J. J. (1987) Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology*, 52 (1), 27-40
- Kiernan, K. E. & Cherlin, A. J. (1999) Parental divorce and partnership dissolution in adulthood: Evidence from a British cohort study. *Population Studies*, 53, 39-48
- Kinnunen, U. & Pulkkinen, L. (1998) Linking economic stress to marital quality among Finnish marital couples. *Journal of Family Issues*, 19 (6), 705-724
- Kulka, R. A. & Weingarten, H. (1979) The long-term effects of parental divorce in childhood on adult adjustment. *Journal of Social Issues*, 35 (4), 50-78
- Kurdek, L. A. (1991) Marital stability and changes in marital quality in newly wed couples: A test of the contextual model. *Journal of Social and Personal Relationships*, 8, 27-48
- Kurdek, L. A. (1998) The nature and predictors of the trajectory of change in marital quality over the first 4 years of marriage for first-married husbands and wives. *Journal of Family Psychology*, 12 (4), 494-510
- Larson, J. H. & Holman, T. B. (1994) Premarital predictors of marital quality and stability. *Family Relations*, 43, 228-237
- Larson, J. H., Wilson, S. M. & Beley, R. (1994) The impact of job insecurity on marital and family relationships. *Family Relations*, 43, 138-143
- Lewis, R. A. & Spanier, G. B. (1979) Theorizing about the quality and stability of marriage. In W. R. Burr, R. Hill, F. I. Nye & I. L. Reiss (Eds.) *Contemporary theories about the family. Vol 1. Research-based theories*. New York: The Free Press
- Locksley, A. (1980) On the effects of wives' employment on marital adjustment and companionship. *Journal of Marriage and the Family*, 42, 337-346
- McLeod, J. D. (1994) Anxiety disorders and marital quality. *Journal of Abnormal Psychology*, 103 (4), 767-776
- Miller, B. C. (1976) A multivariate developmental model of marital satisfaction. *Journal of Marriage and the family*, 38 (4), 643-657
- Newton, T. L. & Kiecolt-Glaser, J. K. (1995) Hostility and erosion of marital quality during early marriage. *Journal of Behavioral Medicine*, 18 (6), 601-619
- Richard, L. S., Wakefield, J. A. & Lewak, R. (1990) Similarity of personality variables as predictors of marital satisfaction: A Minnesota Multiphasic Personality Inventory (MMPI) item analysis. *Personality and Individual Differences*, 11 (1), 39-43
- Rogers, S. J. (1999) Wives' income and marital quality: Are there reciprocal effects? *Journal of Marriage and the Family*, 61, 123-132

- Rogers, S. J. & Amato, P. R. (1997) Is marital quality declining? The evidence from two generations. *Social Forces*, 75 (3), 1089-1100
- Russell, R. J. H. & Wells, P. A. (1994) Personality and quality of marriage. *British Journal of Psychology*, 85, 161-168
- Stets, J. E. (1993) The link between past and present intimate relationships. *Journal of Family Issues*, 14 (2), 236-260
- Voydanoff, P. (1990) Economic distress and family relations: A review of the eighties. *Journal of Marriage and the Family*, 52, 1099-1115
- Webster, P. S., Orbuch, T. L. & House, J. S. (1995) Effects of childhood family background on adult marital quality and perceived stability. *American Journal of Sociology*, 101 (2), 404-432
- Wilkie, J. R., Ferree, M. M. & Ratcliff, K. S. (1998) Gender and fairness: Marital satisfaction in two-earner couples. *Journal of Marriage and the Family*, 60, 577-594
- Williams, L. M. (1995) Associations of stressful life events and marital quality. *Psychological Reports*, 76, 1115-1122

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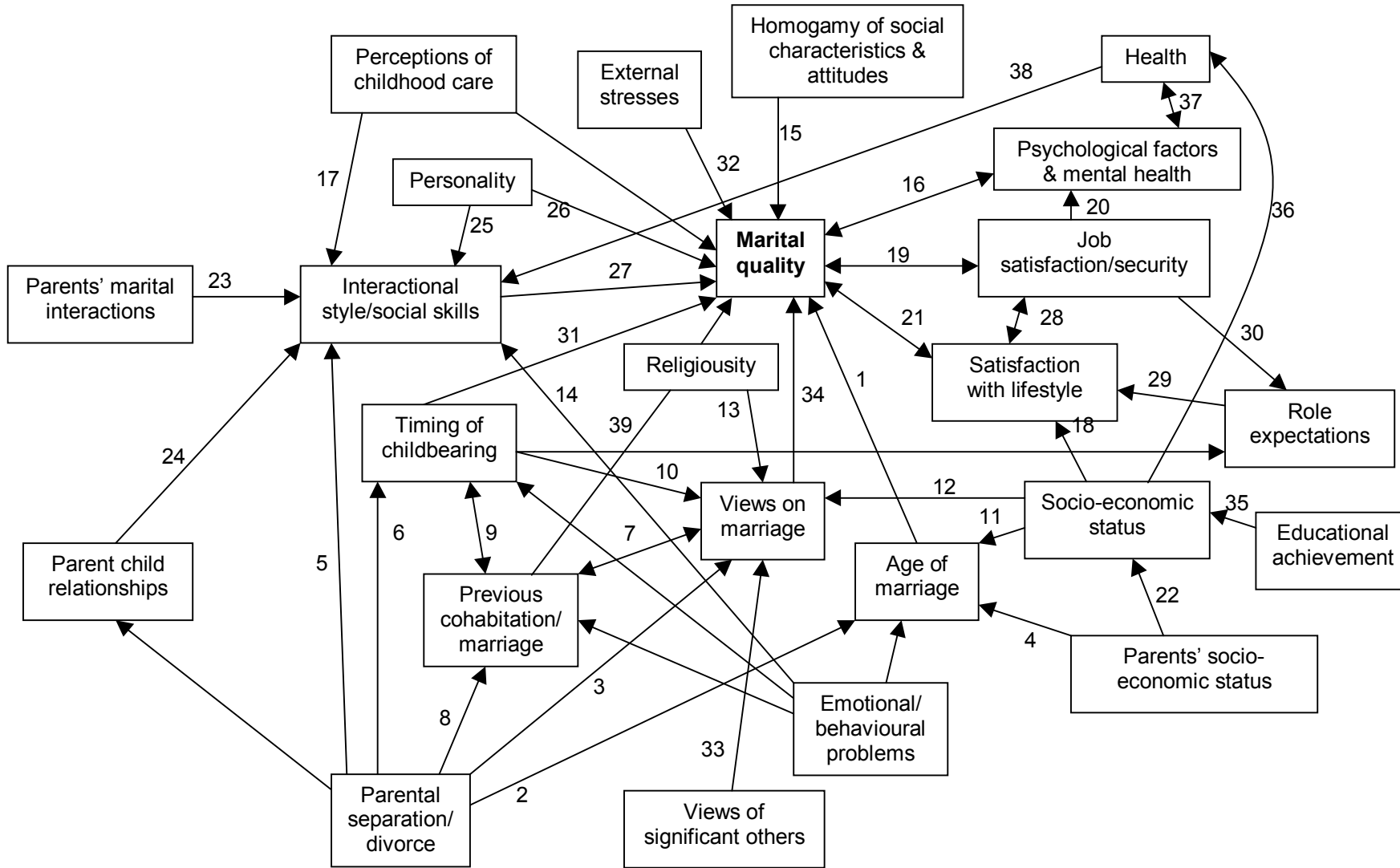
## **9.0 Appendices**

### **Appendix 1: Survey instruments in NCDS-5**

- 'Your life since 1974' (history; self completion questionnaire; 83% response)
- 'What do you think?' (attitudes; self completion questionnaire; 81% response)
- Interview (employment, education and training, family, housing, income, health and health history, citizenship and participation, self-concept measures; 85% response)
- Height and weight
- Malaise inventory (mental health; self completion questionnaire)
- 'Your life' (partner; self completion questionnaire; 82% response)
- Mother interview (cohort member/partner; 99% response)
- 'Your child' (each child; mother completion questionnaire; 99% response)
- Child interview/assessment (e.g. vocab, maths, reading, intelligence, self perception; 97% response).

**Appendix 2a: Comprehensive model of factors influencing marital quality**

Numbered arrows indicate relevant findings and possible mechanisms of influence, detailed in Appendix 2b



## **Appendix 2b: Key to findings and possible mechanisms**

*Label numbers refer to those shown in Appendix 2a. References appear bracketed in superscript, showing authors' initials and date of publication.*

Label	Finding(s)	Possible mechanism(s)
1	Earlier age of marriage predicts poorer marital quality. <sup>(C&amp;B 99)</sup>	Emotional immaturity, lack of preparedness, insufficient time spent searching for an appropriate partner, lack of knowledge of longer term characteristics of spouse, poor marital role performance. <sup>(C&amp;B 99, B&amp;D 99)</sup>
2	Parental separation is associated with an earlier age of marriage. <sup>(A&amp;B 97, G&amp;K 87, C&amp;B 99, B&amp;D99, A86)</sup>	Socialisation hypothesis; reduced parental control/supervision. May marry early to escape home situation. <sup>(A&amp;B 97, G&amp;K 87, C&amp;B 99)</sup>
3	Parental divorce leads to more negative views of marriage. <sup>(G&amp;K 87, W et al 95, K&amp;C 99, A86)</sup>	Lowered expectations of marriage, reduced commitment to marriage, more liberal attitudes to separation/divorce. <sup>(G&amp;K 87, C&amp;B 99, B&amp;D 99)</sup>
4	People from backgrounds of higher socio-economic disadvantage tend to marry at an earlier age. <sup>(C&amp;B 99, B00)</sup>	
5	Children of divorce have reduced levels of marital interaction and communication. <sup>(A&amp;B 97, B&amp;E 89, G&amp;K 87, W et al 95, A&amp;B 91, K&amp;W 79)</sup>  Parental divorce associated with poorer communication and problematic behaviours (e.g. hostility and jealousy). <sup>(B00, A86)</sup>	Lack of appropriate marital role models. <sup>(A&amp;B 97, L&amp;S 79, B&amp;E 89, C&amp;B 99)</sup>
6	Parental divorce leads to greater likelihood of premarital conception. <sup>(C&amp;B 99, B&amp;D 99)</sup>	
7	Premarital cohabitators are more likely to have less traditional attitudes, greater acceptance of divorce, weaker commitment to marriage and higher marital expectations. Previously divorced people are more likely to view separation as a solution to conflict. <sup>(C&amp;B 99)</sup>	Choice of cohabitation may reflect greater unconventionality rather than cohabitation itself having a negative influence. <sup>(D&amp;L 84, G 90)</sup>  Those who cohabit may have attitudes that predispose them to problems in later relationships (e.g. past issues may remain unresolved because of inadequate skills to resolve them). Breaking up itself may engender a temporary view of relationships, influencing people to put little effort into subsequent relationships. <sup>(S 93)</sup>
8	Premarital cohabitators are more likely to have experienced parental separation. <sup>(C&amp;B 99, B&amp;D99)</sup>	Cohabitation and early partnership may be important pathways through which parental divorce affects partnership dissolution. <sup>(K&amp;C 99)</sup>
9	Premarital conception is increasingly associated with premarital cohabitation. <sup>(C&amp;B 99)</sup>	Premarital conception provides a strong incentive to marry in order to legitimise the birth (these marriages may therefore be less stable). <sup>(B&amp;D 99)</sup>
10	Experience of lone motherhood results in less traditional attitudes towards marriage and divorce. <sup>(B&amp;D 99)</sup>	
11	Lower levels of education and socio-economic status associated with younger age at marriage. <sup>(C&amp;B 99)</sup>	

Label	Finding(s)	Possible mechanism(s)
12	Level of education affects attitudes towards traditional family norms.	
13	Those who are religiously active will hold more traditional attitudes towards marriage and divorce. (C&B 99)	
14	Emotional and behavioural problems lead to poor social and interactional skills.	Reduced ability to resolve conflicts.
15	Greater homogamy is positively related to marital quality. (L&S 79, C 91)	
16	Higher levels of depression are associated with lower marital quality. (K 98, D&W 98) People reporting marital dissatisfaction are much more likely to be depressed. (B&M92) Anxiety disorders are associated with poorer marital quality. (M94)	Mental health issues disrupt marital interactions. (M94, G et al 83) The most important positive sources of well-being (e.g. support) are also the most critical negative determinants of distress (e.g. conflict). (D&W 98)
17	Perceptions of childhood care predict marital conflict.	Attachment theory.
18	Poor socio-economic status is associated with lower lifestyle satisfaction.	Perceptions of adequacy are more important than actual status. (L&S 79, K&P 98)
19	Job insecurity is negatively related to marital and family functioning. (L et al 94)	Job insecurity and anxiety may spill over into marital and family life and each may influence each other in a circular fashion. (L et al 94, K&P 98, B et al 89)
20	Job insecurity is associated with depression, anxiety and psychological distress. (V 90, K&P 98)	
21	A lower income-to-needs ratio and making cutbacks are negatively associated with marital quality. (V 90) The greater the socio-economic adequacy of the family the greater the marital quality. (L&S 79)	Through tensions and conflict. The effects of economic distress will depend on, e.g. coping resources and behaviours and social support. (V 90)
22	Parents' education and income facilitates children's socio-economic attainment. (A&B 97)	High parental socio-economic status eases economic strain. (A&B 97)
23	Children from chronic, high conflict marriages may develop poor interpersonal skills. (A&B 97, B&E 89, F 99a)	Socialisation about appropriate marital behaviour is gleaned from observing parents. Social skills are first learned in the family of origin. (J&B 98, F 99a)
24	Aspects of early social environment predict marital satisfaction. (K&C 87) Physical abuse and overprotection predict marital conflict. (B&A 96)	Formative experiences establish a complex set of persistent learned beliefs and orientations that affect how persons interact with and evaluate their spouse. Children raised in rejecting environments learn to expect rejection and develop avoidant attachments. (B&A 96)
25	Personality influences the interaction between spouses. Disrupted patterns of communication and behaviour exchange in disturbed couples may be due to personality characteristics. (K 91, K&C 87, N&K-G 95)	Agreeableness (co-operation and trust), openness (more inclined to listen and understand) and conscientiousness (increased efforts in the relationship). (B et al 99) Discrepancies in personality lead to inter-

Label	Finding(s)	Possible mechanism(s)
25 (cont.)	e.g. trait anxiety leads to increased negativity in interactions which is associated with poorer marital quality. (C et al 00)	spousal conflict and eventual marital distress. (K 91)
26	<p>Neuroticism contributes negatively to own and partner's marital quality. (K&amp;B 97, R&amp;W 94, B et al 99, K&amp;C 87)</p> <p>Agreeableness, openness and conscientiousness may have a positive influence on marital quality. (B et al 99, K&amp;C 87)</p> <p>Husbands' hostility is related to decrements in marital quality. (N&amp;K-G 95)</p> <p>Personality congruence is a reliable predictor of marital satisfaction. (R et al 90, K 91)</p>	<p>High neuroticism leads to seeing partner in a less idealised way.</p> <p>Attachment insecurity is associated with neuroticism and tendency to experience high levels of negative affect. (D et al 98)</p>
27	Total negativity scores for couple negatively correlated with marital satisfaction. The character of early interactions establish the quality of the relationship. (K&B 97, J&B 98)	Problems lie in the escalation of negativity and resolution of conflict. (G et al 98)
28	Satisfaction with lifestyle is influenced by job satisfaction. (L&S 79)	
29	Congruence between role expectations and performance leads to greater satisfaction. (L&S 79)	People are guided by conventional gender expectations in their judgements of what is fair. Perceptions of fairness mediate the effects of division of labour preferences and role preferences on marital satisfaction. (W et al 98)
30	It is not whether a woman is working, but the extent to which that behaviour violates her and others' role expectations that affects marital adjustment. (H&M 81)	
31	<p>Childless individuals report a higher level of marital satisfaction than people with children. (H&amp;M 81, K 91, G&amp;M 82)</p> <p>Birth of a baby related to increases in marital discord (R 99) and decreases in marital adjustment. (B83, B et al 85)</p>	<p>Childless couples may be better adjusted because they have more time and resources to devote to their relationship. (H&amp;M 81, G&amp;M 82)</p> <p>The presence of a young child places additional strains on a marital relationship. (B&amp;D99)</p> <p>Unplanned parenthood interferes with the completion of vocational and psychological tasks which otherwise facilitate role performance especially in the early stages of the family life cycle. (K 91)</p> <p>Wives' marital adjustment more sensitive to the effects of a new baby, due to the greater burdens placed on mothers. (B83, B et al 85)</p> <p>Interactional style and parenting may be more important than background characteristics. (B00)</p>
32	There is a significant correlation between stressful life events and marital quality. (W 95)	Stressful life events are mediated by coping resources. (W 95) Relationship distress can result from aversive and ineffectual responses to conflict caused by these events. (B et al 00)

Label	Finding(s)	Possible mechanism(s)
33	Marital quality will be enhanced if parents, in-laws and friends approve of the relationship. (L&S 79)	
34	Greater acceptance of divorce is related to lower marital quality. (A&R 99)	The belief that an unrewarding marriage should be ended may lead to less investment. (A&R 99)
35	Higher education leads to greater socio-economic attainment.	
36	Socio-economic status is related to health outcomes. (B&M92)	
37	There is a reciprocal relationship between mental and physical health. (B&M92)	The relationship between marital quality and health may be mediated by psychological factors. (B&M92)
38	Health problems can negatively influence marital interactions. (B&M92)	The way couples respond to the stress and coping required to deal with their own or spouse's health problems is important for marital quality. Acute illness can cause a crisis; chronic illness requires long-term adaptations. (B&M92)
39	There is a negative association between premarital cohabitation and marital quality. (D&L 84, G 90)  Premarital romantic and sexual involvements are negative predictors of marital satisfaction. (K&C 87)	

**Appendix 3: Key to variables used to represent each factor**

<b>Label</b>	<b>Factor</b>	<b>Description of variables</b>
<b>A</b>	Marital/ relationship quality	1. How happy is your relationship? 2. Average global marital quality score 3. Average relationship agreement score
<b>B</b>	Views on marriage	1. Support for marriage attitude scale 2. Permissiveness on work and family attitude scale 3. Opposition to family life attitude scale 4. Support for sex equality attitude scale
<b>C</b>	Age of marriage and cohabitation	1. Age at marriage 2. Whether cohabited before marriage 3. Age of spouse when started living together
<b>D</b>	Previous cohabitation/ marriage	1. No. of cohabiting/marital relationships (respondent) 2. No. of cohabiting/marital relationships (partner)
<b>E</b>	Parental factors	1. Parents ever permanently separated/divorced 2. Social class of father or male head 3. Mother's social class if works
<b>F</b>	Children	1. Number of children 2. Age at birth of first child 3. Children born before current marriage?
<b>G</b>	Socio-economic status and employment	1. Social class (current/last job) 2. Current main economic activity 3. Partner's current main economic activity 4. Receipt of benefits 5. Any debts?
<b>H</b>	Mental health	1. Malaise inventory total score (age 23) 2. Malaise inventory total score (age 33)
<b>I</b>	Education	1. Highest qualification level
<b>J</b>	Physical health	1. General health (age 23) 2. General health (age 33) 3. Health in last 12 months (age 33)

## **Appendix 4: Guide to measures used to represent each variable**

### A: Measures of marital/relationship quality

#### 1. Relationship happiness

How happy is your relationship, all things considered?

(Scored 1-7: 1 Extremely unhappy, 4 Neither happy nor unhappy, 7 Extremely happy)

#### 2. Relationship agreement

How much do you and your partner agree or disagree about..?

- Handling family finances;
- How to spend your spare time;
- Showing affection for each other;
- Liking the same friends;
- Having sex together;
- Behaving generally in the right and decent way towards other people;
- Sharing household tasks;
- Outlook on life;
- Relationships with parents or parents-in-law;
- Deciding if or when to have children;
- How children should be brought up.

(Scored 1-5: 1 Nearly always disagree, 2 Often disagree, 3 Sometimes agree/disagree/never talk about it, 4 Often agree, 5 Nearly always agree)

#### 3. Global relationship quality

Do you wish you had never married/lived together?

(Scored 1-4: 1 Frequently, 2 Occasionally, 3 Rarely, 4 Never)

If you lived your life over would you marry/live together again?

(Scored 1/0: 1 Marry same person, 0 Not marry same person/ Don't Know)

Do you share your problems with your partner?

(Scored 1-4: 1 All of them, 2 Most of them, 3 Some of them, 4 None/hardly any of them)

### B: Measures of views on marriage (Scales used as identified by Ferri, 1991)

#### 1. Support for marriage attitude scale

- Divorce is too easy to get these days;
- Married people are generally happier than unmarried people;
- Couples who have children should not separate;
- Marriage is for life;
- All women should have the right to choose an abortion if they wish (*reversed*);
- It is alright for people to have children without being married (*reversed*).

(Scored 1-5: 1 Strongly agree, 2 agree, 3 uncertain, 4 disagree, 5 Strongly disagree)

#### 2. Permissiveness on work and family attitude scale

- Women who do not have a job are dull (*reversed*);
- A marriage without children is not fully complete (*reversed*);
- A person must have a job to feel a full member of society (*reversed*);

- Being a housewife is just as fulfilling as working for pay;
  - People can have a satisfying relationship without children;
  - A person can get satisfaction out of life without a job.
- (Scored 1-5: 1 Strongly agree, 2 agree, 3 uncertain, 4 disagree, 5 Strongly disagree)

### 3. Opposition to family life attitude scale

- Being single provides more time to experience life and find out about yourself;
  - Being single provides fewer worries or responsibilities;
  - Having children seriously interferes with the freedom of parents.
- (Scored 1-5: 1 Strongly agree, 2 agree, 3 uncertain, 4 disagree, 5 Strongly disagree)

### 4. Support for sex equality attitude scale

- Women should have the same chances as men to get some training or have a career;
- Men and women should all have the chance to do the same kind of work;
- There should be more women bosses in important jobs in business and industry;
- Men and women should do the same jobs around the house;
- When both partners work full-time, the man should take an equal share of the domestic chores;
- I would not want a woman to be my boss (*reversed*);
- If a child is ill and both parents are working it should usually be the mother who takes time off to look after the child (*reversed*);
- It is less important for a woman to go out to work than it is for a man (*reversed*).

(Scored 1-5: 1 Strongly agree, 2 agree, 3 uncertain, 4 disagree, 5 Strongly disagree)

## C: Age of marriage and cohabitation

### 1. Age at marriage

(Scored as seen)

### 2. Whether cohabited before marriage

(Scored 1/2: 1 Cohabited before marriage, 2 Didn't cohabit before marriage)

### 3. Age of spouse when started living together

(Scored as seen)

## D: Previous cohabitation/marriage

### 1. Number of cohabiting/marital relationships (respondent)

(Scored as seen)

### 2. Number of cohabiting/marital relationships (partner)

(Scored as seen)

E: Parental factors

1. Parents ever permanently separated/divorced

(Scored: 1 Parents separated/divorced, 2 Parents stayed together)

2. Social class of father or male head

(Scored: 1 I, 2 II, 3 III non-manual, 4 III manual, 5 IV non-manual, 6 IV manual, 7 V, 8 unclear)

3. Mother's social class if works

(Scored: 1 I, 2 II, 3 III non-manual, 4 III manual, 5 IV non-manual, 6 IV manual, 7 V, 8 unclassified)

F: Children

1. Number of children

(Scored as seen)

2. Age at birth of first child

(Scored as seen)

3. Children before current marriage?

(Scored 1/2: 1 Yes, 2 No)

G: Socio-economic status and employment

1. Social class (current/last job)

(Scored: 10 Professional (1.0), 20 Managerial/tech (2.0), 31 Skilled/non-manual (3.1), 32 Skilled Manual (3.2), 40 Partly skilled (4.0), 50 Unskilled (5.0))

2. Current main economic activity

(Scored 1-10: 1 Full-time employee, 2 Part-time employee, 3 Full-time self-employed, 4 Part-time self-employed, 5 Unemployed, 6 Full-time education, 7 Temporarily sick/disabled, 8 Permanently sick/disabled, 9 Home/Family care, 10 Other)

3. Partner's current main economic activity

(Scored 1-10: 1 Full-time employee, 2 Part-time employee, 3 Full-time self-employed, 4 Part-time self-employed, 5 Unemployed, 6 Full-time education, 7 Temporarily sick/disabled, 8 Permanently sick/disabled, 9 Home/Family care, 10 Other)

4. Receipt of benefits

(Scored 1/2: 1 Yes, 2 No)

5. Any debts?

(Scored 1/2: 1 Yes, 2 No)

H: Mental health

1. Malaise inventory total score (age 23)

- Do you often have back ache?
- Do you feel tired most of the time?
- Do you often feel miserable or depressed?

- Do you often have bad headaches?
  - Do you often get worried about things?
  - Do you usually have great difficult in falling or staying asleep?
  - Do you usually wake unnecessarily early in the morning?
  - Do you wear yourself out worrying about your health?
  - Do you often get into a violent rage?
  - Do people often annoy and irritate you?
  - Have you at times had a twitching of the face, head or shoulders?
  - Do you often suddenly become scared for no good reason?
  - Are you scared to be alone when there are no friends near you?
  - Are you easily upset or irritated?
  - Are you frightened of going out alone or meeting people?
  - Are you constantly keyed up and jittery?
  - Do you suffer from indigestion?
  - Do you often suffer from an upset stomach?
  - Is your appetite poor?
  - Does every little thing get on your nerves and wear you out?
  - Does your heart often race like mad?
  - Do you often have bad pains in your eyes?
  - Are you troubled with rheumatism or fibrositis?
  - Have you ever had a nervous breakdown?
- (Each item scored: 1 Yes, 2 No. Total score 0-22)

2. Malaise inventory total score (age 33)

(Scored as above)

I: Education

1. Highest qualification level

(Scored 1-5: 0 none, 1 Some, 2 O level or equivalent, 3 A level or equivalent, 4 Higher education, 5 Degree)

J: Physical health

1. General health (age 23)

(Scored 1-4: 1 Excellent, 2 Good, 3 Fair, 4 Poor)

2. General health (age 33)

(Scored 1-4: 1 Excellent, 2 Good, 3 Fair, 4 Poor)

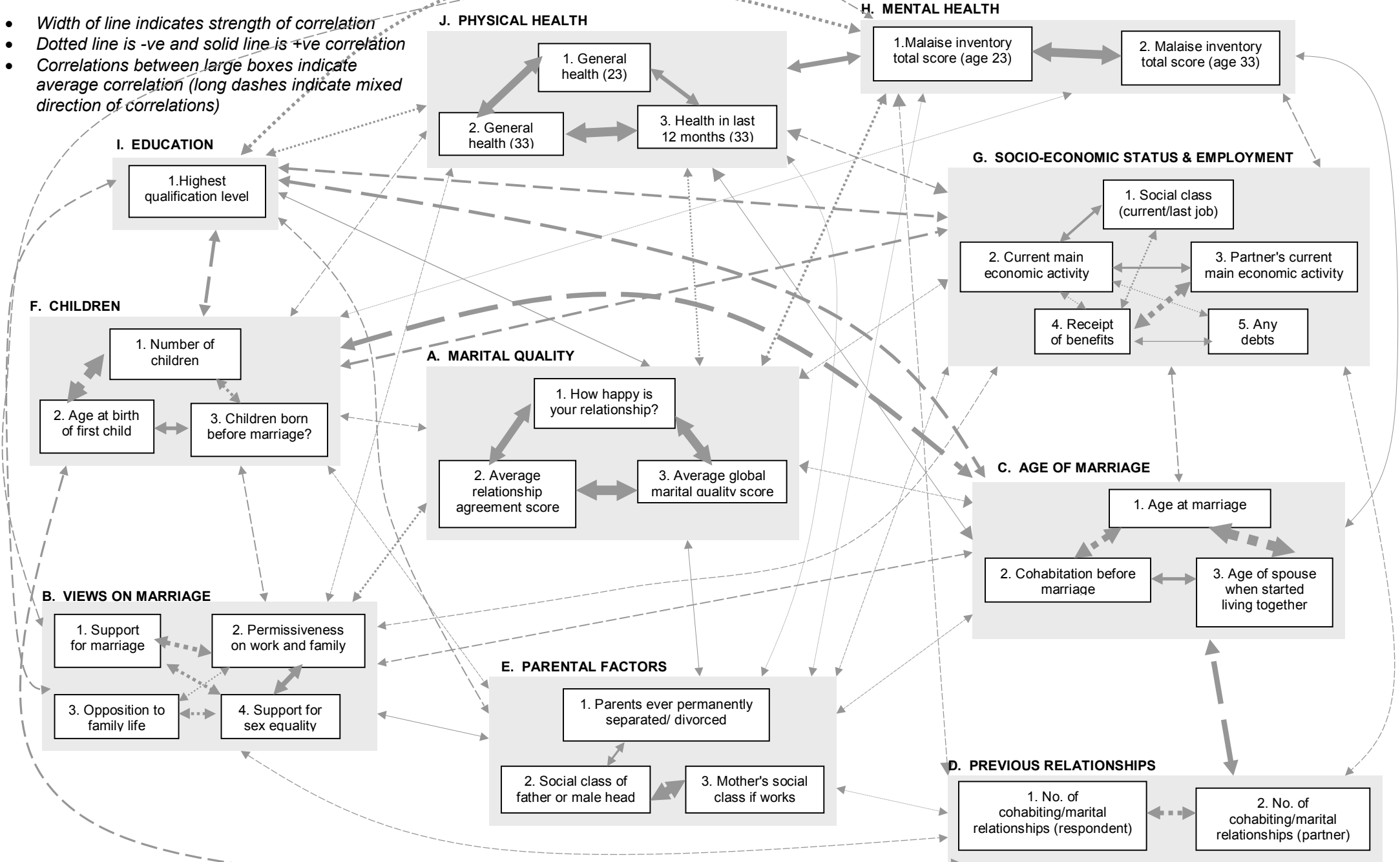
3. Health in last 12 months (age 33)

(Scored 1-3: 1 Good, 2 Fairly good, 3 Not so good)



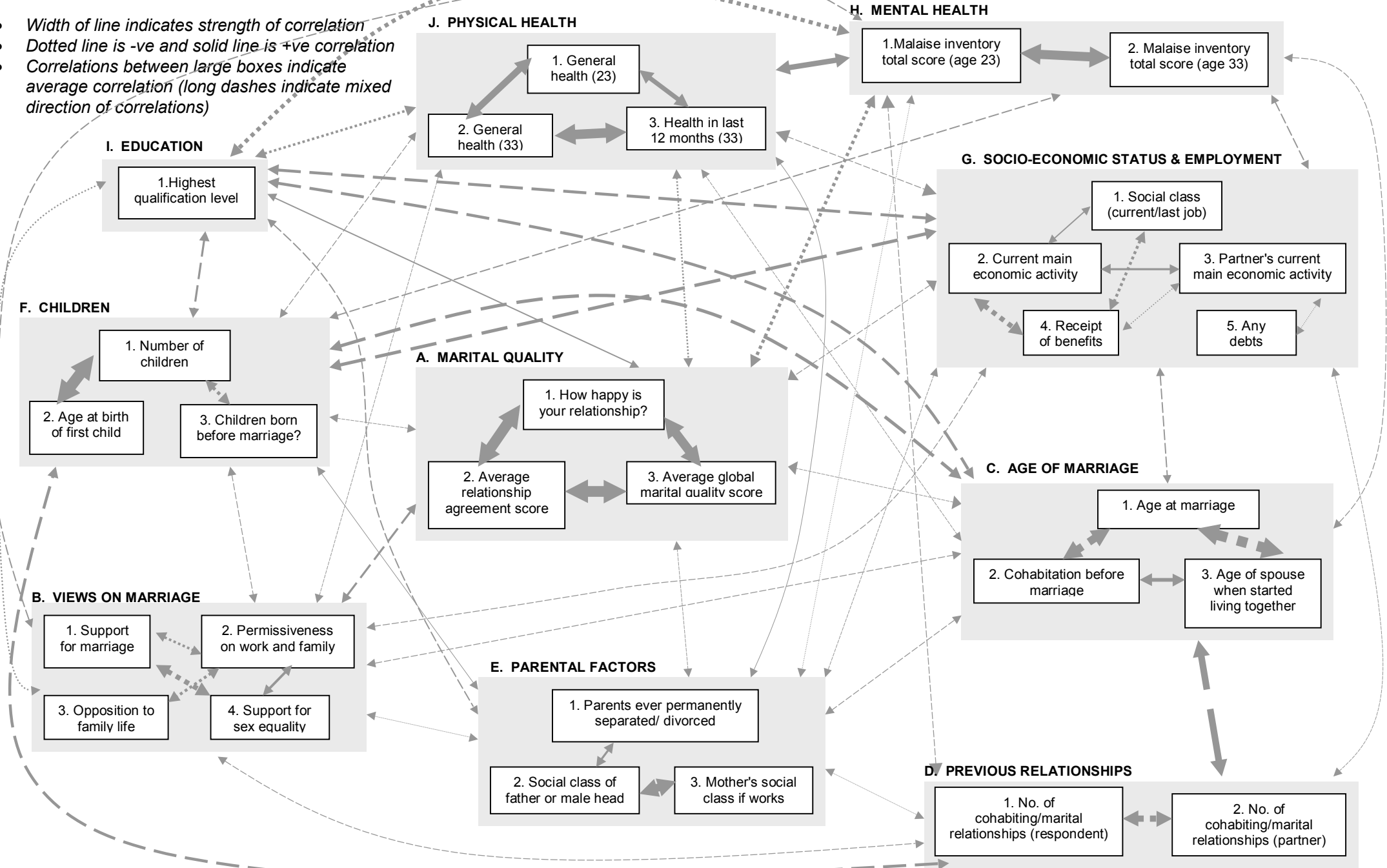
**Appendix 5a: Diagram of relationship between variables for married men**

- Width of line indicates strength of correlation
- Dotted line is -ve and solid line is +ve correlation
- Correlations between large boxes indicate average correlation (long dashes indicate mixed direction of correlations)



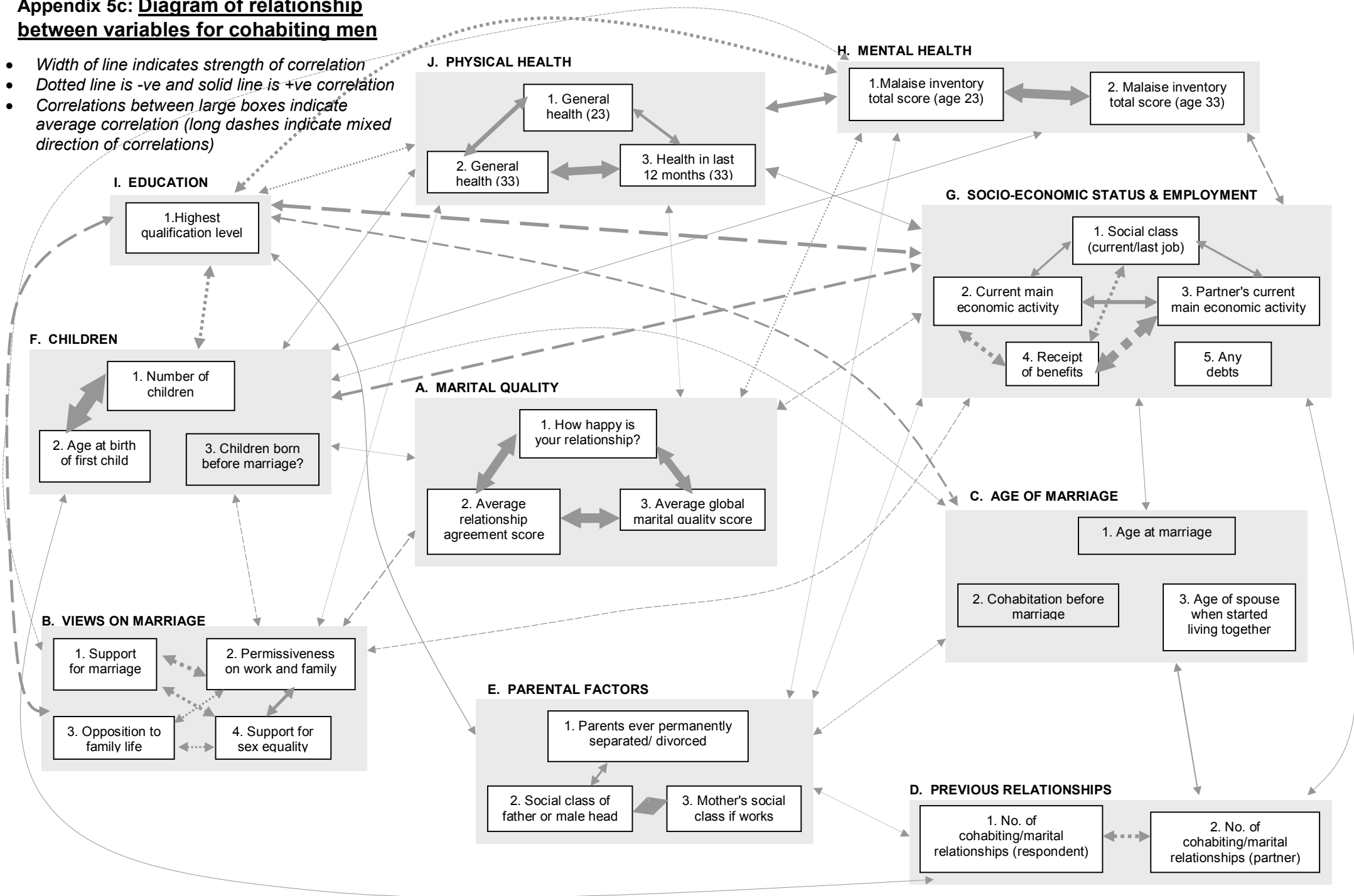
**Appendix 5b: Diagram of relationship between variables for married women**

- Width of line indicates strength of correlation
- Dotted line is -ve and solid line is +ve correlation
- Correlations between large boxes indicate average correlation (long dashes indicate mixed direction of correlations)



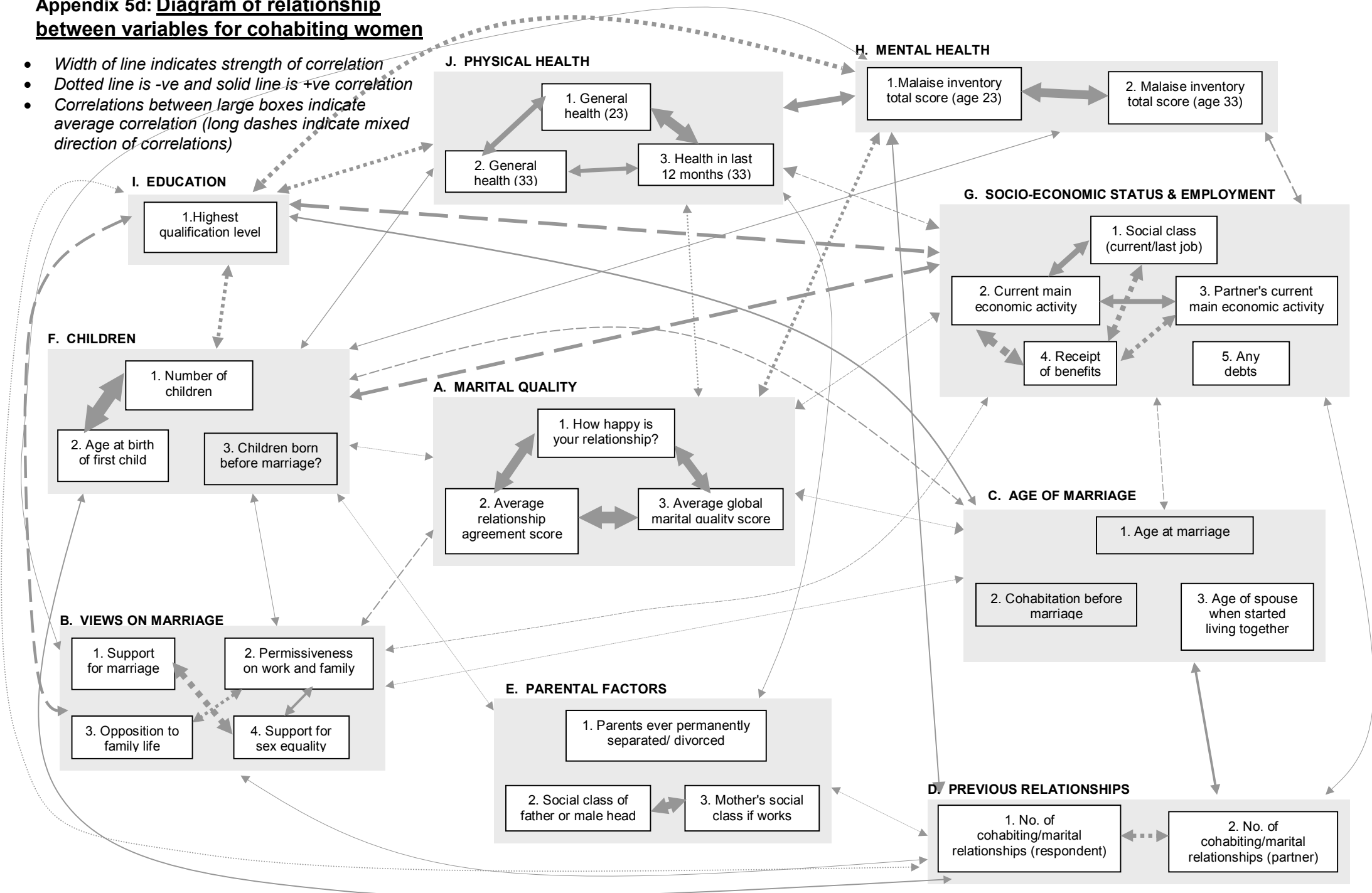
**Appendix 5c: Diagram of relationship between variables for cohabiting men**

- Width of line indicates strength of correlation
- Dotted line is -ve and solid line is +ve correlation
- Correlations between large boxes indicate average correlation (long dashes indicate mixed direction of correlations)



**Appendix 5d: Diagram of relationship between variables for cohabiting women**

- Width of line indicates strength of correlation
- Dotted line is -ve and solid line is +ve correlation
- Correlations between large boxes indicate average correlation (long dashes indicate mixed direction of correlations)



### Appendix 6a: Correlations between variables for married men

Only correlations significant at the 0.01 level are shown. Higher correlations are shown in a darker shade.

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	D1	D2	E1	E2	E3	F1	F2	F3	G1	G2	G3	G4	G5	H1	H2	I1	J1	J2	J3
A1																													
A2	.431																												
A3	.496	.559																											
B1	-.119	-.213	-.133																										
B2	-.081	-.055	-.135	-.256																									
B3	-.081	-.055	-.135		-.099																								
B4	-.079	-.127	-.178	-.188	.289	-.166																							
C1		.048	.051	-.047	-.099		-.094																						
C2		.048	.053	-.186	.047	.045	.098	-.393																					
C3			-.050		-.094		.098	-.587	.182																				
D1				.120			-.057	.397	-.255	-.245																			
D2				-.085			.066	-.280	.314	.383	-.267																		
E1		.048	.051						.102		-.082																		
E2					.046		.049	-.087	.057	.075			.112																
E3					.064									.483															
F1		-.049	-.058	-.082	.110	-.066	.134	-.455	.105	.344	-.066	.094																	
F2		.074	.113		-.123	-.053	-.090	.579	.133	-.430				-.089															
F3		.066	.075	-.082				-.229	.315	.073	-.291	.205	.058																
G1		-.060	-.084	-.052	.126	-.060	.123	-.146	.071	.171					.118	.051													
G2									-.047		.071	-.055	-.067																
G3				-.095		-.044	.088																						
G4	.047	.051		.070	-.097	.065	-.094	.352	-.078	-.221	.128																		
G5	.082		.083					.063		-.043	.090	.044																	
H1	-.103	-.139	-.170	-.066	.132	-.050	.066		.094	.060	-.076																		
H2	-.115	-.175	-.213		.090	-.088	.056		.053	.074	-.057	-.088																	
I1		.062	.105	.061	-.181		-.171	.212	-.090	-.255			.084	-.106	-.046	-.177	.308	.098	-.503	-.128		.143							
J1	-.070	-.092	-.110			-.052																							
J2	-.114	-.114	-.171		.071		.051		.076				-.062			.061	-.096		.148	.179		-.067							
J3	-.072	-.062	-.100						.048				-.048				-.084		.104	.190			-.059						

### Appendix 6b: Correlations between variables for married women

Only correlations significant at the 0.01 level are shown. Higher correlations are shown in a darker shade.

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	D1	D2	E1	E2	E3	F1	F2	F3	G1	G2	G3	G4	G5	H1	H2	I1	J1	J2	J3
A1																													
A2	.614																												
A3	.522	.633																											
B1	-.128	-.203	-.135																										
B2	-.118	-.110	-.155	-.148																									
B3	.186	.224	.177		-.173																								
B4				-.291	.136																								
C1	.071	.086	.080	.106	-.050		-.108																						
C2				-.197			.109	-.460																					
C3			-.060	-.073	.053			-.589	.228																				
D1				.186			-.061	.469	-.402	-.303																			
D2				-.132				-.336	.334	.432	-.355																		
E1			.053	-.053				.114			-.083	.062																	
E2			-.052					-.067	.065	.047			.124																
E3								-.043						.466															
F1	-.068	-.074	-.080	-.085	.076	-.071	.122	-.351	.095	.263		.067			.064														
F2				-.050		-.072	.047	-.077	.049	.054	-.063	.052				.652													
F3			.052	-.129				-.325	.409	.164	-.490	.312	.099			-.188													
G1		-.071	-.087				.163	-.191	.092	.147			-.064	.097		.235	.049	-.093											
G2				-.081	-.098		.161									.291	.282		.063										
G3	-.071	-.080	-.076					-.049			.052	-.074				.082		-.088		.121									
G4	.063	.046	.056	.059	-.057	.068	-.105	.296	-.088	-.205	.053	-.060				-.757	-.809	.103	-.167	-.278	-.061								
G5	.057	.065	.071					.059	-.042				.041			-.075		.056				-.044							
H1	-.143	-.156	-.217		.120	-.107	.050	-.067	-.056	.088	.064		-.064	.059		.084		-.114	.178		.060	-.069	-.076						
H2	-.201	-.220	-.269		.120	-.140			-.062	.046	.072	-.060	-.071	.069		.074		-.117	.137	.044	.083	-.055	-.099	.538					
I1	.062	.072	.114		-.114		-.252	.236	-.093	-.182			.092	-.104		-.214		.142	-.474	-.097	-.099	.163			-.250	-.207			
J1	-.105	-.104	-.142			-.048			-.048	.046	.059			.052			-.050	-.088	.107				-.049	.260	.362	-.146			
J2	-.109	-.115	-.175		.068	-.053			-.053		.062	-.049		.064		.071		-.112	.123	.041	.066	-.066		.410	.259	-.184	.385		
J3	-.064	-.060	-.086						-.045		.050	-.049				.046		-.061	.070	.041	.059	-.045	-.064	.355	.209	-.122	.265	.551	

### Appendix 6c: Correlations between variables for cohabiting men

Only correlations significant at the 0.01 level are shown. Higher correlations are shown in a darker shade.

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	D1	D2	E1	E2	E3	F1	F2	F3	G1	G2	G3	G4	G5	H1	H2	I1	J1	J2	J3
A1																													
A2	.538																												
A3	.466	.580																											
B1																													
B2		-.143	-.118	-.243																									
B3	.197	.206			-.114																								
B4		-.189	-.158	-.193	.193	-.122																							
C1																													
C2																													
C3																													
D1																													
D2									.470	-.213																			
E1											-.121																		
E2													.132																
E3														.500															
F1		-.122			.206	.118				.162	.195																		
F2		-.142			.183					.120						.826													
F3																													
G1				-.151	.263		.236									.276	.267												
G2	-.124		-.135	-.120									-.131			.143			.111										
G3			-.119						.154							.407	.401		.127	.250									
G4		.163	.143		-.124		-.115					.156				-.527	-.587		-.196	-.274	-.561								
G5				-.122																									
H1			-.143																.139	.179	.126								
H2	-.113	-.119	-.167		.156	-.118							-.107			.120			.152	.142		-.143		.548					
I1				.191	-.213		-.264			-.118			.148			-.330	-.259		-.519	-.183	-.179	.225			-.189	-.186			
J1																								.287	.164				
J2	-.156	-.166	-.193														.113			.130				.157	.275	-.158	.270		
J3				-.129												.110			.116	.145				.286	.377	-.167	.161	.476	

### Appendix 6d: Correlations between variables for cohabiting women

Only correlations significant at the 0.01 level are shown. Higher correlations are shown in a darker shade.

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	D1	D2	E1	E2	E3	F1	F2	F3	G1	G2	G3	G4	G5	H1	H2	I1	J1	J2	J3
A1																													
A2	.563																												
A3	.503	.691																											
B1		-.122																											
B2		-.186	-.189																										
B3		.188	.151																										
B4				-.362	.156																								
C1																													
C2																													
C3			-.135				-.117																						
D1				.164																									
D2									.518	-.230																			
E1											-.129																		
E2																													
E3													.431																
F1		-.154					.186			.124	.221		-.122																
F2											.144					.784													
F3																													
G1							.264									.401	.267												
G2							.188				.131					.491	.350		.335										
G3	-.125	-.132														.165	.126			.294									
G4							-.170									-.728	-.763		-.311	-.454	-.255								
G5		.127	.134																										
H1	-.128	-.155	-.228		.134		.154				.125					.174			.187	.172		-.162							
H2	-.187	-.205	-.296								.152					.153			.196	.146					.534				
I1				.143	-.141		-.437				-.136					-.395	-.237		-.527	-.295		.320			-.318	-.220			
J1																				.155				.352	.174	-.189			
J2	-.181	-.179	-.255											.115		.209	.114		.193			-.140		.335	.435	-.235	.312		
J3			-.179													.190			.166					.276	.417	-.202	.233	.574	



## **Appendix 7: Summary results of sequential regression analyses**

Order of variables entered into the equation:

1. B1, B2, B3, B4, C1, C2, C3, F1, F2, F3, H1, H2
2. D1, D2, G1, G2, G3, G4, G5, J1, J2, J3
3. E1, E2, E3, I1

### **Married men**

Measure	Model	SS	MS	Df	F	Sig	R <sup>2</sup>	Adj R <sup>2</sup>	Std Error	Sig of chg
A1	1	203.07	16.92	12	13.59	.000	.061	.057	1.12	.000
	2	263.21	11.96	22	9.77	.000	.079	.071	1.11	.000
	3	343.87	13.23	26	11.07	.000	.104	.094	1.09	.000
A2	1	92.78	7.73	12	36.52	.000	.149	.145	.46	.000
	2	119.29	5.42	22	26.85	.000	.192	.184	.45	.000
	3	152.99	5.88	26	31.18	.000	.246	.238	.43	.000
A3	1	112.53	9.38	12	34.06	.000	.140	.136	.52	.000
	2	159.49	7.25	22	28.15	.000	.199	.192	.51	.000
	3	202.39	7.78	26	32.34	.000	.252	.245	.49	.000

### **Married women**

Measure	Model	SS	MS	Df	F	Sig	R <sup>2</sup>	Adj R <sup>2</sup>	Std Error	Sig of chg
A1	1	387.55	32.30	12	26.19	.000	.101	.097	1.11	.000
	2	420.00	19.09	22	15.57	.000	.109	.102	1.11	.003
	3	420.33	16.17	26	13.17	.000	.109	.101	1.11	.992
A2	1	124.26	10.36	12	42.67	.000	.154	.151	.49	.000
	2	132.60	6.03	22	25.06	.000	.165	.158	.49	.000
	3	132.93	5.11	26	21.24	.000	.165	.157	.49	.844
A3	1	134.45	11.20	12	38.59	.000	.142	.138	.54	.000
	2	146.49	6.66	22	23.19	.000	.154	.148	.54	.000
	3	147.36	5.67	26	19.73	.000	.155	.147	.54	.551

### **Cohabiting men**

Measure	Model	SS	MS	Df	F	Sig	R <sup>2</sup>	Adj R <sup>2</sup>	Std Error	Sig of chg
A1	1	30.29	3.37	9	2.61	.006	.062	.038	1.13	.006
	2	45.01	2.37	19	1.85	.017	.092	.042	1.13	.325
	3	49.91	2.17	23	1.69	.026	.102	.042	1.13	.433
A2	1	11.61	1.29	9	4.38	.000	.100	.077	.54	.000
	2	15.16	.80	19	2.73	.000	.130	.082	.54	.281
	3	17.88	.78	23	2.70	.000	.153	.097	.54	.053
A3	1	9.93	1.10	9	3.17	.001	.074	.051	.59	.001
	2	14.48	.76	19	2.21	.003	.108	.059	.59	.219
	3	17.24	.75	23	2.20	.001	.129	.070	.58	.090

### **Cohabiting women**

Measure	Model	SS	MS	Df	F	Sig	R <sup>2</sup>	Adj R <sup>2</sup>	Std Error	Sig of chg
A1	1	41.07	4.56	9	2.41	.012	.071	.041	1.38	.012
	2	65.85	3.47	19	1.85	.018	.113	.052	1.37	.217
	3	69.40	3.02	23	1.60	.043	.119	.045	1.37	.758
A2	1	15.55	1.62	9	4.83	.000	.132	.105	.58	.000
	2	19.49	1.03	19	3.12	.000	.177	.121	.57	.137
	3	20.02	.87	23	2.63	.000	.182	.113	.58	.812
A3	1	21.52	2.39	9	5.98	.000	.159	.132	.63	.000
	2	27.01	1.42	19	3.61	.000	.199	.144	.63	.184
	3	27.28	1.19	23	2.97	.000	.201	.134	.63	.952